# MANITOBA MOTOR CARRIER INDUSTRY:

# SYSTEM CHARACTERISTICS

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# I. SUMMARY

The purpose of this report is to present available information on the Manitoba motor carrier industry as a background to the review of motor carrier regulation. The data is produced in two major sections, one dealing with the trucking industry and the other with the passenger carrier industry. Some highlights of the report are outlined below under these two headings.

## 1. Manitoba Trucking Industry

### 1.1 Industry Structure

Four major classifications of trucks are differentiated by the type of use allowed. These are public service vehicles, commercial trucks, farm trucks, and "other" trucks.

Table S1 summarizes the distribution of gross vehicle weights of Manitoba trucks. Large numbers of commercial, farm and "other" trucks are under 4001 kilograms. These light trucks and vans are not used primarily for freight transport. Farm trucks are more numerous in each weight range from 4,001 to 24,000 kg, with "other" trucks more numerous in the 24,001 to 36,001 kg weight ranges. For-hire trucks comprise the majority of trucks over 40,000 kg.

TABLE S1

Summary of Gross Vehicle Weights of Manitoba Trucks by Type, 1982[1]

| Gross Vehicle Weight Range (kilograms) | Number of Trucks | | | | |
|---|---|---|---|---|---|
| | For-Hire | Commercial | Farm | Other | Total |
| Under 4,001 | 128 | 8,702 | 38,571 | 69,133 | 116,534 |
| 4,001-6,000 | 22 | 1,304 | 4,603 | 2,267 | 8,196 |
| 6,001-8,000 | 16 | 462 | 3,260 | 736 | 4,474 |
| 8,001-10,000 | 46 | 451 | 3,867 | 1,057 | 5,421 |
| 10,001-12,000 | 69 | 474 | 4,166 | 1,478 | 6,187 |
| 12,001-14,000 | 62 | 488 | 3,990 | 786 | 5,326 |
| 14,001-16,000 | 20 | 139 | 505 | 180 | 844 |
| 16,001-18,000 | 7 | 35 | 223 | 125 | 390 |
| 18,001-20,000 | 58 | 172 | 1,218 | 483 | 1,931 |
| 20,001-24,000 | 83 | 285 | 1,645 | 900 | 2,913 |
| 24,001-28,000 | 45 | 117 | 67 | 271 | 500 |
| 28,001-32,000 | 43 | 39 | 25 | 105 | 212 |
| 32,001-36,000 | 49 | 64 | 24 | 184 | 321 |
| 36,001-40,000 | 934 | 644 | 290 | 955 | 2,823 |
| 40,001-48,000 | 102 | 12 | 5 | 16 | 135 |
| Over 48,000 | 440 | 48 | 29 | 93 | 610 |
| Total | 2,124 | 13,436 | 62,488 | 78,769 | 156,817 |

1. Source: Manitoba vehicle registration file, December 1982

Trucks over 4,000 kilograms gross vehicle weight are placed into fleets according to registered owner by truck type in Table S2. Most of the small fleets of one to three trucks consist of farm trucks. For fleets of five to ten trucks and 16 or more trucks, fleets of "other" trucks are more numerous than any other type. Commercial and "other" trucks have approximately the same number of fleets in fleets of sizes 11 to 15. Fleets are differentiated by truck types, so that a company with both commercial and "other" trucks would be considered as two separate fleets.

The number of leased trucks by category was also identified from the vehicle registrations. Two types of leases were identified. Straight leases are leases of the truck only. A trucking subcontract is considered to be the leasing of a trucking service, through the lease of the truck and driver. A considerable amount of judgement was required to place leased trucks into these two categories, with the results displayed in Table S3.

Leasing is most prevalent in for-hire trucking, with 38% of the fleet leased. The majority of these are trucking subcontracts. Thirteen percent of commercial trucks are leased, with more straight leases than trucking subcontracts. Leasing is insignificant in farm trucking, while 3% of "other" trucks are leased. The majority of the leased "other" trucks are straight leases.

TABLE S2

Summary of Manitoba Truck Fleets by Type, Over 4,000 kg , 1982[1]

| Number of Trucks in fleet | Number of Fleets (over 4,000 kg ) | | | | |
|---|---|---|---|---|---|
| | For-Hire | Commercial | Farm | Other | Total |
| 1 | 126 | 1,607 | 15,524 | 3,264 | 20,521 |
| 2 | 60 | 450 | 2,939 | 567 | 4,016 |
| 3 | 31 | 130 | 452 | 237 | 850 |
| 4 | 20 | 75 | 104 | 103 | 302 |
| 5 | 13 | 34 | 50 | 54 | 151 |
| 6 | 18 | 22 | 20 | 43 | 103 |
| 7 | 5 | 18 | 15 | 27 | 65 |
| 8 | 2 | 13 | 13 | 23 | 51 |
| 9 | 6 | 7 | 8 | 13 | 34 |
| 10 | 6 | 6 | 3 | 15 | 30 |
| 11 | 3 | 10 | 0 | 10 | 23 |
| 12 | 5 | 4 | 1 | 11 | 21 |
| 13-15 | 5 | 9 | 2 | 9 | 25 |
| 16-20 | 6 | 5 | 0 | 9 | 20 |
| 21-25 | 6 | 5 | 1 | 9 | 21 |
| 26-30 | 2 | 2 | 0 | 4 | 8 |
| 31-35 | 2 | 2 | 0 | 6 | 10 |
| 36-40 | 1 | 1 | 0 | 5 | 7 |
| Over 40 | 7 | 4 | 0 | 12 | 23 |
| Total | 324 | 2,404 | 19,132 | 4,421 | 26,281 |

1. Source: Manitoba vehicle registration file, December 1982

TABLE S3

Manitoba Leased Trucks by Type, Over 4,000 kg, 1982[1]

| Truck Type | Straight Lease[2] | Trucking Subcontract[3] | Total Lease | Total Registered | Lease Percent of Total |
|---|---|---|---|---|---|
| For-hire | 59 | 699 | 758 | 1,996 | 38.0 |
| Commercial | 355 | 277 | 632 | 4,734 | 13.4 |
| Farm | 14 | 25 | 39 | 23,917 | 0.2 |
| Other | 229 | 91 | 320 | 9,636 | 3.3 |
| Total | 657 | 1,092 | 1,749 | 40,283 | 4.3 |

1. Source: Manitoba vehicle registration file, December 1982.
2. Straight lease represents the lease of a truck without driver.
3. Trucking subcontract represents a lease other than the lease of a truck without driver. Included here are owner-operators and trucking firms leased as brokers or subcontractors. A considerable degree of judgement was required to differentiate between leases and subcontracts.

### 1.1.1 Public Service Trucking

Public service or for-hire carriers operate for compensation under very specific operating authorities granted by the Motor Transport Board. An authority might specify: the areas which can be served, the commodities carried, and the type of equipment which can be used. In addition, the rates which can be charged intraprovincially, or for shipments totally within Manitoba, are prescribed.

There were 2,915 public service trucks licensed in Manitoba in 1981. A total of 559 companies had operating authorities in Manitoba, of which 331 were based in Manitoba. There were 307 companies with intra-Manitoba authority (strictly within Manitoba), 279 with interprovincial authority (between Manitoba and other provinces), and 185 with international authority (between Manitoba and U.S. points).

General freight is the commodity listed most often on for-hire operating authorities, appearing on the authorities 186 times. Of listed restrictions, the restriction to hauling goods of named firms was the most often listed, applying 254 times.

In 1980, Statistics Canada surveyed 194 Manitoba based for-hire carriers with annual revenue over $100,000. These carriers earned $322.1 million in revenue, had $167.4 million in assets, operated 10,014 trucks and trailers, and employed 5,639 people. Class I carriers, those earning over $2 million in annual revenue, represented over 70 percent of each of these values while having only 8 percent of the firms.

The average fleet size of for-hire carriers was 6.2 trucks in 1982, although 69 percent of the firms had from one to three trucks in their fleet. For-hire trucks with extraprovincial licences tend to be larger in size and belong to larger fleets than those with intraprovincial licences.

Compared to for-hire trucking in other provinces, Manitoba has a greater proportion of large and profitable firms. Manitoba is an "exporter" of trucking services. Few intermediate size firms exist and they are relatively unprofitable. Manitoba has small firms which are comparable to those in other provinces in terms of profitability.

### 1.1.2 Commercial Trucking

Commercial trucks are defined by exception, identified as trucks not operating for compensation and not meeting the conditions for local trucks or farm trucks. There were 15,263 commercial trucks registered in Manitoba in 1981. The operations and financial information available for commercial carriers is limited.

In 1982, 91 percent of commercial truck fleet owners owned from one to three trucks and the average fleet size was 2.0 trucks. Seven owners had more than 30 trucks, indicating some large fleets exist. A total of 65% of commercial trucks were under 4,001 kilograms gross vehicle weight, and are not considered to be used extensively for hauling freight.

### 1.1.3 Farm Trucking

Farm trucks are trucks registered to farmers, who in the opinion of the registrar are engaged in farming operations to a significant degree. There were 66,308 farm trucks registered in Manitoba in 1981.

Of these, 61.7 percent were below 4001 kilograms gross vehicle weight, or mainly pick-up trucks. Very few tractor and trailer units are owned by farmers, with the single-axle and tandem-axle trucks representing 37.8 percent of the trucks owned. Farm truck fleets are generally small, with one to three trucks in 99% of the fleets and the average fleet size is 1.25 trucks.

Operations and financial information on farm trucking are minimal.

### 1.1.4 "Other" Trucking

"Other" trucks are trucks used as private passenger vehicles, trucks operating within a specified area, or trucks carrying exempt commodities. The term "other" is used for lack of a better word, since these trucks include a variety of types.

In 1981, there were 99,320 "other" trucks registered in Manitoba. The majority of these are pick-ups and vans not used primarily for the transportation of goods, shown by the fact that 88 percent of

other trucks have gross vehicle weights below 4,001 kilograms.

The average "other" truck fleet size is 2.2 trucks, and 92% of "other" trucks are in small fleets of one to three trucks. However, there are 23 fleets with more than 30 trucks and 12 with more than 40 trucks. Large truck fleets are more numerous among "other" trucks than any other truck type.

## 1.2 Flow Characteristics

For-hire trucks and commercial trucks represent only 2% and 8% of total licensed trucks respectively, yet these classes each represent 28% of the truck traffic on the provincial highway system. Conversely, trucks with other licenses account for 54% of licensed trucks but only 24% of traffic. Farm trucks represent 36% of licensed trucks but only 18% of traffic. The reasons for this include: for-hire trucks have average trip-lengths of 157 kilometres within Manitoba compared to 75 kilometres for all other truck types; for-hire and commercial trucks travel more frequently on highways than farm and other trucks; and pick-up trucks and vans are not sampled for the Truck Weight Survey.

The majority of truck trips are short, with 75% under 400 kilometres and 31% under 50 kilometres. Of all trips, 70% are intraprovincial, 22% are Manitoba to/from other locations, and 8% are through traffic. Manitoba licensed trucks represent 75% of trucks sampled.

Of the trucks sampled, 44% were straight trucks, 49% were standard 18-wheeler tractor and trailer units, and the remaining 6% were other types. The majority (51%) of these trucks had observed gross vehicle weights under 15,000 kilograms. Empty trucks represented 32.5% of all trucks sampled, with no single commodity carried by more than 9% of all trucks.

For-hire traffic in Manitoba is composed of 18% through traffic, 48% intraprovincial and 34% traffic between Manitoba and other provinces. International traffic is not measured. The through traffic accounts for an estimated 33% of the tonne-kilometres of for-hire trucking use of Manitoba highways, compared to 34% for intraprovincial trucking. Through traffic tonnage is unbalanced, with 73% westbound and 27% eastbound. Traffic between Manitoba and eastern Canada is unbalanced, with 43% to Manitoba and 57% to eastern Canada. The same is true for traffic between western Canada and Manitoba, with 43% into Manitoba and 57% out to western Canada. Figure 1 illustrates the for-hire traffic flow pattern.

Intraprovincial traffic generated only 20% of total for-hire revenue earned in 1980. Traffic from Manitoba to other provinces generated 45% of the total, and traffic destined to Manitoba from other provinces accounted for the remaining 35%.

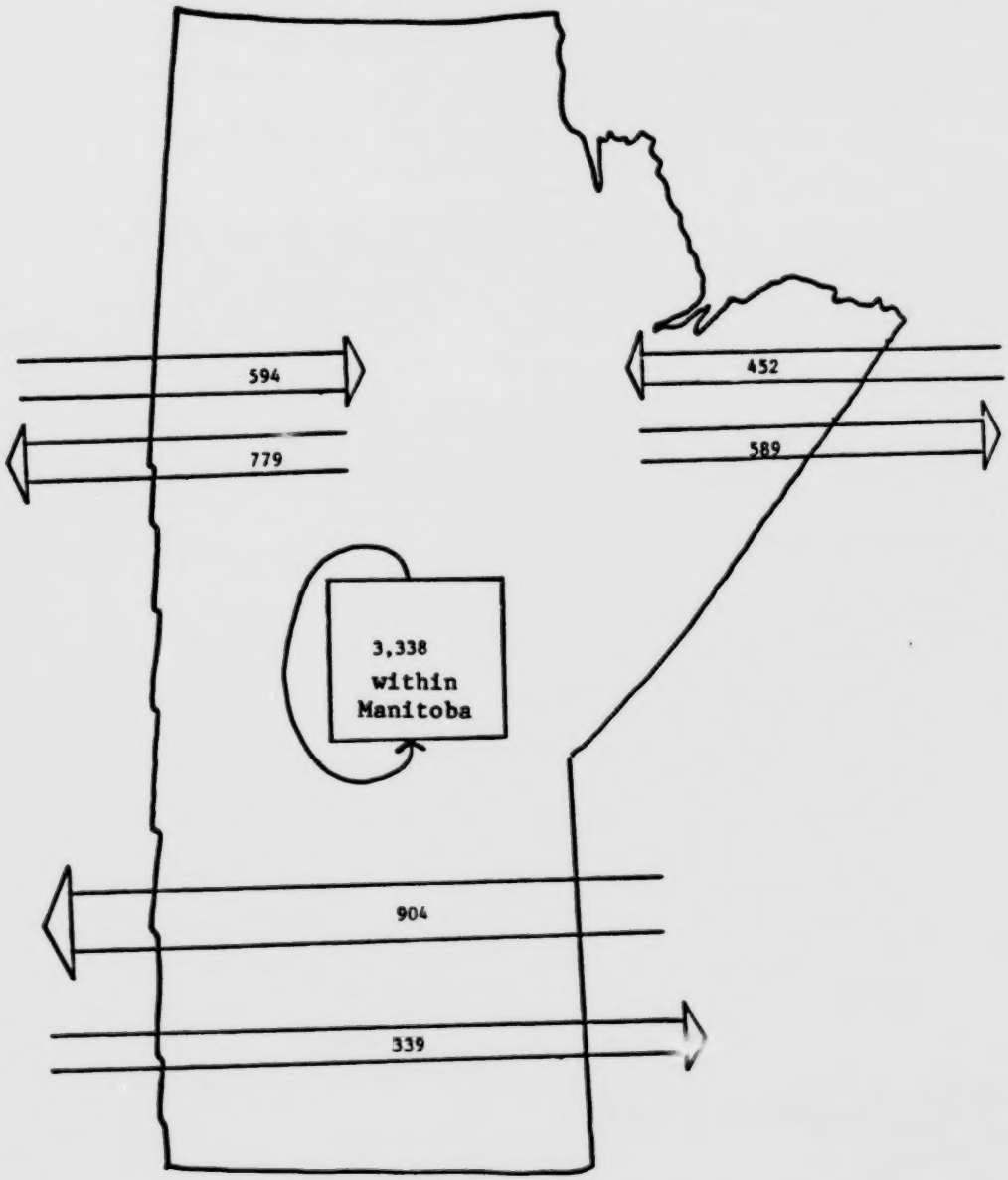
## 2. Manitoba Passenger Industry

Two major categories of public service passenger vehicles in Manitoba are discussed in this report. These are the intercity bus and the intermunicipal livery carriers.

## Figure 1

For-Hire Truck Freight Flow, 1980

('000's tonnes)




1. Source: Statistics Canada 53-224 For-Hire Trucking Survey, 1980

## 2.1 Intercity Bus Industry

The routes served and fares charged by intercity buses in Manitoba are controlled by the Motor Transport Board. The two major intraprovincial carriers are Greyhound Lines of Canada and Grey Goose Bus Lines. Due to the small number of carriers, very little operational and financial information can be released due to confidentiality constraints.

An examination of the scheduled services offered to 79 of the largest Manitoba communities shows that all but three receive regular service. As expected, the larger communities receive greater frequency of service, although the number of stops per 1000 of population generally is greater for the smaller communities than the larger ones.

Bus companies derive a substantial proportion of revenue from parcel express service. The rates charged are prescribed by the Motor Transport Board, and the parcel dimensions, weight and value must be less than prescribed limits. Of the 79 communities listed, 53 had full parcel express services, 16 had prepaid and collect service (no C.O.D.), two were drop-off points only and eight had no parcel express service.

## 2.2 Intermunicipal Livery Industry

Intermunicipal livery vehicles are public service vehicles, other than buses, with authority to transport passengers for compensation.

The area of operation and fares which can be charged are controlled by the Motor Transport Board. Communities have the authority to regulate fares and service within their own community through municipal by-laws. Livery vehicles or taxis operating within the City of Winnipeg are regulated by the Taxicab Board.

In 1982, there were 634 intermunicipal livery vehicles registered in Manitoba. A total of 239 of these were registered outside of Winnipeg, belonging to 132 different owners. The average fleet size was 1.8 vehicles, with 92% of the fleets containing three vehicles or less. Another 376 vehicles were registered in Winnipeg to 131 owners for an average fleet size of 2.9 with 95% in fleets of three or less. Owner-operators each represent a fleet. The remaining 19 vehicles were registered as limousines.

There is very little operations and financial information available on the intermunicipal livery industry.

## II. INTRODUCTION

The Government of Manitoba is undertaking a review of regulation of the motor carrier industry in Manitoba. Previous studies of the motor carrier industry have consistently faced the problem of insufficient information. This paper is an attempt to consolidate available motor carrier industry data to provide background information on system characteristics.

Motor carrier regulation in Manitoba involves different industry segments and different markets. For example, the trucking industry is composed of for-hire carriers, both extraprovincial and intra-provincial; private or commercial carriers, farm operators and "other" operators. The markets served by these carriers are local, intra-provincial, interprovincial and international. The passenger industry serves similar markets with intercity buses and inter-municipal liveries presently being regulated in Manitoba by the Motor Transport Board.

## III. MANITOBA TRUCKING INDUSTRY

### 1. Trucking Industry Structure

#### 1.1 Licensing System

Under the present licencing system trucks are licenced differently for different uses. The major classifications are as follows[1]:

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1. Sections 2, 3 and 169.1 of the Manitoba Highway Traffic Act.

a. public service (for-hire): trucks authorized to haul goods for compensation. Operating authorities are granted by the Motor Transport Board. Public service vehicles are identified by licence plates with the letter combinations PA, PS or PX.

b. farm: trucks registered by a farmer for farm use. These trucks have licence plates with an F as the first letter.

c. "other" (or T-plate): included here are all trucks which conform to any of the following descriptions. These trucks have a plate with T or Y as the first letter.

i) private passenger trucks (trucks under 3700 kilograms not used for "commercial purposes")

ii) public service vehicles operated within a city, town or village or carrying exempt commodities.

iii) commercial trucks operated by a government, operated within 30 kilometres of a designated community or within 20 kilometres of Winnipeg's perimeter, operated for highway construction or maintenance purposes, or carrying exempt commodities.

The complete description of exempt commodities is contained in Manitoba Regulation 231/73[2]. These include farm products, repair tools, gravel or sand and primary forest products belonging to the holder of a cutting authority.

2. Manitoba Regulation 231/73, exemptions under sections 258 and 291 of the Highway Traffic Act.

d. commercial (or private): trucks other than public service except those identified under b. and c. above. These trucks have licence plates with CT, CV or CW.

The number of trucks licenced in each of these classes for 1981 is contained in Table 1. These are the final figures for the registration year ending February 28, 1982.

TABLE 1

Trucks Licenced by Class, Manitoba 1981 [1]

| Licence Class | Number | Percent |
|---|---|---|
| Public Service | 2,915 | 1.6 |
| Private | 15,263 | 8.3 |
| Farm | 66,308 | 36.1 |
| "Other" | 99,320 | 54.0 |
| Total | 183,806 | 100.0 |

1. Source: Motor Vehicle Branch, Manitoba Department of Highways and Transportation.

The "other" or T-plate licence group contains the greatest number of trucks. This group, containing trucks used for both private and for-hire purposes, accounts for 54% of licenced trucks. The next largest group, farm trucks, contains 36% of all Manitoba licenced trucks. The remaining two groups, the private or commercial and public service carriers, represent 8% and 2% of licenced carriers respectively. All classes except the for-hire class contain a high proportion of vans, pick-ups and small vehicles.

The area of operation of public service and private carriers is also specified as either extraprovincial or strictly intraprovincial. The extraprovincial commercial carriers have the CTX plate designation, while the extraprovincial public service carriers have plates with PX or PSX letter combinations.

The Canadian Agreement on Vehicle Registrations (CAVR) came into effect on April 1, 1981. This agreement allows for registration fees to be paid in proportion to fleet distance travelled in each province. Vehicle owners are issued plates and registration forms in the province of their choice, with cab cards issued by other provinces. The cab card identifies the vehicle and the owner and provides proof that the proportional registration fees have been paid to that province. There were 1,977 Manitoba plated vehicles included in the CAVR in 1981/82 with another 5,821 vehicles issued with cab cards.

The CAVR applies to vehicles with three or more axles and to trucks and buses with registered gross vehicle weight of 5,500 kilograms or more. These are referred to as Category A vehicles.

Category B vehicles enjoy full and free reciprocity in Canada. Registration fees are paid to one province, with no additional fees required for travel in other provinces. Category B vehicles include farm vehicles, government vehicles, recreational vehicles, trailers and vehicles used for transporting household goods.

Agreements for full and free reciprocity for all vehicles exist between Manitoba and 27 U.S. states. Under these agreements, vehicles registered in one jurisdiction are allowed to travel to, from or through the other jurisdiction without paying registration fees to that jurisdiction. Partial reciprocity exists between Manitoba and North Dakota, with no reciprocity with the remaining 22 states. Approximately 5,000 U.S. based trucks are included in these reciprocity agreements.

## 1.2 Structure of the For-Hire Industry

### 1.2.1 Operating Authority

As previously mentioned in section 1.1, all for-hire carriers operating within Manitoba, between Manitoba and other jurisdictions, or through Manitoba must have an operating authority granted to them by the Motor Transport Board. The operating authority specifies the geographic market which the carrier may serve, the commodities which may be carried, and any restrictions which apply. Carriers may be restricted to serving only particular companies, having certain load characteristics (such as truckload only) or using only specified equipment (such as tank type vehicles only).

All for-hire carriers with operating authority in Manitoba are categorized by area of operation and base in Table 2A and Table 2B. There were a total of 559 for-hire carriers with Manitoba operating authorities as of May 29, 1981. Of these, 331 were based in Manitoba, 168 based in other Canadian provinces and 60 based in the United States.

Of the 180 carriers authorized to operate strictly within Manitoba, 179 were Manitoba based. The remaining carrier with only intra-Manitoba authority was based in Alberta. Of the 135 carriers with only interprovincial authority, 128 were based in other Canadian provinces and 7 in Manitoba. Manitoba based carriers represented 25 of the 82 carriers with only international authority, with 56 United States based carriers and one carrier based in Alberta. A total of 50 carriers had the authority to transport Manitoba goods intraprovincially, interprovincially and internationally, with 42 of these being Manitoba based. The schematic diagram following Table 2 illustrates the market segmentation.

Table 2B summarizes the number of carriers serving each market. Due to some carriers serving multiple markets, the totals will be greater than the number of carriers. A total of 307 carriers serve the intra-Manitoba market with 285 of them being Manitoba based. There are slightly fewer carriers operating interprovincially, 279, with 109 based in Manitoba, 166 based in other Canadian provinces, and 4 based in the United States. The international movement of goods is carried out by 185 carriers of which 99 are Manitoba based, 26 based in other provinces and 60 based in the United States.

## Table 2A

### Number of For-Hire Carriers Authorized to Operate in Manitoba by Type[1]

| Area of Operation | Manitoba Based | Based in Other Canadian Provinces | United States Based | Total, all Bases |
|---|---|---|---|---|
| Intra-Manitoba only | 179 | 1[2] | 0 | 180[2] |
| Interprovincial only | 7 | 128[2] | 0 | 135[2] |
| International only | 25 | 1 | 56 | 82 |
| Intra and inter-provincial | 46 | 13 | 0 | 59 |
| Interprovincial and International | 14 | 17 | 4 | 35 |
| Intraprovincial and International | 18 | 0 | 0 | 18 |
| Intra and Inter-provincial and International | 42 | 8 | 0 | 50 |
| Total, All Areas | 331 | 168 | 60 | 559 |

1. Source: Manitoba Trucking Association, Manitoba Official Ship by Truck Directory, 1981-82
2. Initially, four carriers serving intra-Manitoba were found which were based in other Canadian provinces. Upon further checking, three were found to be interprovincial carriers. The table reflects this change.

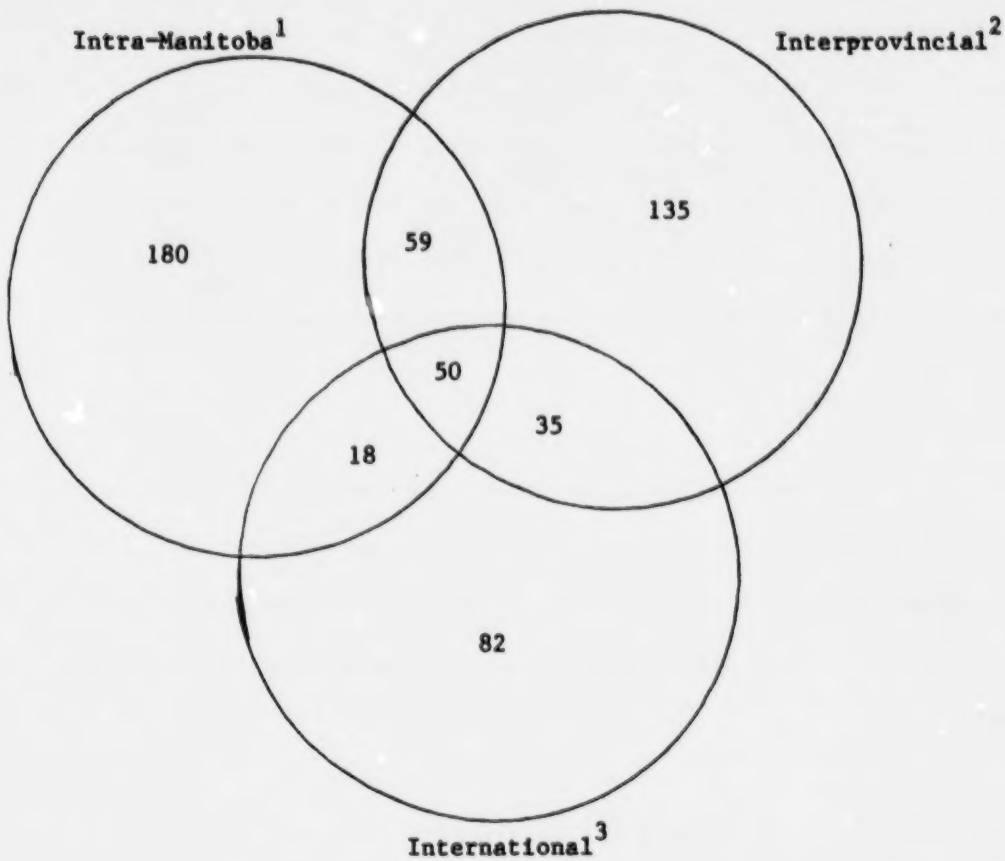
## Table 2B

### Summary of For-Hire Carriers Operating in Manitoba by Type[1]

| Area of Operation[3] | Manitoba Based | Based in Other Canadian Provinces | United States Based | Total, all Bases |
|---|---|---|---|---|
| Intra-Manitoba | 285 | 22[2] | 0 | 307[2] |
| Interprovincial | 109 | 166[2] | 4 | 279[2] |
| International | 99 | 26 | 60 | 185 |

1. Source: Manitoba Trucking Association, Manitoba Official Ship by Truck Directory, 1981-82
2. Initially, four carriers serving intra-Manitoba were found which were based in other Canadian provinces. Upon further checking, three were found to be interprovincial carriers. The table reflects this change.
3. Carriers operating in more than one area are counted once for each area they serve. The total of all areas does not equal the number of carriers.

## Schematic of Manitoba For-Hire Operating Authorities

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1. Intra-Manitoba: carriers which are authorized to transport goods with a Manitoba origin and Manitoba destination.
2. Interprovincial: carriers which are authorized to transport goods between Manitoba and other Canadian provinces.
3. International: carriers which are authorized to transport goods between Manitoba and the United States.

The commodities which for-hire carriers are authorized to transport are specified by the Motor Transport Board. By reviewing the operating authorities granted, the number of carriers which are authorized to handle each commodity type for each of the intraprovincial, interprovincial and international markets can be determined. This information is displayed in Table 3. It must be noted here that some degree of interpretation of commodity categories was required to produce these tables from the operating authority descriptions. As well, where more than one commodity was listed for a carrier, the carrier was included in each commodity group. As a result, the total over all commodities will be greater than the number of carriers.

For intra-Manitoba carrier authorities, the commodities mentioned most often are general freight (129), livestock and poultry (83), buildings, mobile homes, trailers and boats (47), and dairy products and eggs (42). All other commodities are listed less than 25 times each.

For interprovincial authorities, there is a more even distribution of commodities. Livestock and poultry are mentioned most often (56), followed in order by general freight (42), raw grains, seed and oilseeds (33), household goods (32), and fertilizer (27). All other products are listed less than 25 times each. There are 20 instances where only corridor traffic is authorized, i.e., no pickup or dropoff in Manitoba is allowed.

Commodities most frequently listed on the operating authorities for international movements are designated commodities which are listed

Table 3

Commodities Authorized for Carriage by For-Hire Carriers, 1981[1]

| Commodity Group | Commodity | Intra-Manitoba | Inter-Provincial | Inter-National | Total, all Markets |
|---|---|---|---|---|---|
| Live Animals | livestock & poultry | 83 | 56 | 6 | 145 |
| | horses | 2 | 7 | 2 | 11 |
| Food, Feed, Beverages and Tobacco | meat and fish | 7 | 11 | 13 | 31 |
| | dairy products & eggs | 42 | 12 | 8 | 62 |
| | raw grains, seed & oil seeds | 18 | 33 | 17 | 68 |
| | feeds & ingredients | 13 | 22 | 17 | 52 |
| | fruit, vegetables & honey | 6 | 12 | 8 | 26 |
| | prepared foods | 8 | 17 | 9 | 34 |
| Crude Materials, Inedible | designated commodities[2] | 0 | 0 | 88 | 88 |
| | crude wood (timber,pulp, logs, poles, etc.) | 3 | 5 | 6 | 14 |
| | ores and concentrates (includes gypsum & limestone) | 7 | 9 | 5 | 21 |
| | stone and gravel | 3 | 7 | 6 | 16 |
| | salt | 3 | 4 | 2 | 9 |
| | scrap metal | 3 | 3 | 3 | 9 |
| | plants and flowers | 1 | 3 | 3 | 7 |
| Fabricated Materials, Inedible | cement and cement products | 6 | 11 | 3 | 20 |
| | lumber, wood products & building materials | 9 | 21 | 17 | 47 |
| | raw paper | 3 | 2 | 3 | 8 |
| | explosives and related products | 4 | 5 | 0 | 9 |
| | vegetable and animal oils | 0 | 4 | 1 | 5 |
| | chemicals, acids and related products | 6 | 14 | 13 | 33 |
| | fertilizer | 12 | 27 | 13 | 52 |
| | petroleum products | 21 | 23 | 6 | 50 |
| | steel, steel products, metal products | 11 | 23 | 8 | 42 |
| | brick, tile & glass | 0 | 4 | 3 | 7 |

Table 3 cont'd

Commodities Authorized for Carriage by For-Hire Carriers, 1981[1]

| Commodity Group | Commodity | Intra-Manitoba | Inter-Provincial | Inter-National | Total, all Markets |
|---|---|---|---|---|---|
| End Products, Inedible | buildings, mobile homes, trailers & boats | 47 | 24 | 13 | 84 |
| | household goods (used) | 20 | 32 | 12 | 64 |
| | construction equipment | 15 | 7 | 3 | 25 |
| | agricultural equipment | 10 | 10 | 12 | 32 |
| | other heavy equipment and machinery | 19 | 11 | 3 | 33 |
| | motor vehicles and snowmobiles | 2 | 13 | 13 | 28 |
| | tires and tubes | 0 | 2 | 2 | 4 |
| | miscellaneous equipment and materials | 7 | 22 | 9 | 38 |
| | furniture and appliances (new) | 5 | 4 | 1 | 10 |
| | paper products (including newspaper) | 12 | 2 | 3 | 17 |
| | plastic products | 0 | 2 | 4 | 6 |
| Miscellaneous Goods | general freight | 129 | 42 | 15 | 186 |
| | miscellaneous goods not specified elsewhere | 17 | 9 | 7 | 33 |
| Corridor Traffic | goods authorized to travel through Manitoba with no pickup or drop off | 0 | 20 | 7 | 27 |

1. Source: Manitoba Trucking Association, The Manitoba Official Ship by Truck Directory, 1981-82
2. Designated commodities include raw farm products, livestock, honey and peat moss. For a complete description, see Revised Regulation H60-R16.

88 times. Authority to transport these goods, which include raw farm products, livestock, honey and peat moss is readily granted according to Revised Regulation H60-R16. All other commodities are listed less than 25 times.

When the three markets are totalled, general freight appears most often (186), followed in order by livestock and poultry (145), designated commodities (88), buildings, mobile homes, trailers and boats (84), raw grains, seed and oilseeds (68), used household goods (64), dairy products and eggs (62), fertilizer (52), feeds and ingredients (52), and petroleum products (50). All other commodities were listed less than 50 times. Here, designated commodities are treated separately as a special category, although there is some overlap between designated products and other commodities.

The operating authorities granted by the Motor Transport Board may contain restrictions relating to particular companies to be served, certain load restrictions, or the type of equipment to be used. The number of carriers with restrictions of different types is summarized in Table 4.

One type of restriction on carriers is that they can carry goods for specified firms only. These are commonly referred to as contract carriers. This restriction is the type most often encountered, with 93 intra-Manitoba, 108 interprovincial and 53 international operating authorities listing a specific firm for which goods could be transported.

Table 4

Restrictions Applied to For-Hire Operating Authorities, 1981[1]

| Type of Restriction | Intra-Manitoba | Inter-Provincial | Inter-National | Total, All Markets |
|---|---|---|---|---|
| Goods of Specified Firms | 93 | 108 | 53 | 254 |
| Single trip load[2] or surplus loads | 105 | 16 | 1 | 122 |
| Specified weight or size (including truckload only) | 27 | 42 | 9 | 78 |
| Tank-type vehicles to be used | 9 | 16 | 6 | 31 |
| Lowbed equipment to be used | 10 | 13 | 2 | 25 |
| Hopper bottom equipment to be used | 7 | 17 | 1 | 25 |
| Regular trailers to be used | 1 | 6 | 2 | 9 |
| Other specified equipment to be used[3] | 12 | 25 | 6 | 43 |
| Tank-type vehicles not to be used | 5 | 16 | 5 | 26 |
| Other specified equipment not to be used | 6 | 5 | 0 | 11 |
| Total, All Restrictions | 275 | 264 | 85 | 624 |

1. Source: Manitoba Trucking Association, Manitoba Official Ship by Truck Directory, 1981-82. A carrier cannot be counted more than once in each cell, but it may be counted once for each restriction type that applies for each market in which the restriction applies.
2. For a definition of single trip load authority, refer to Schedule D, Rule 11 of the Rules of Carriage.
3. Includes requirements for special loading and unloading equipment due to the nature of the goods carried.

Another type of restriction is the single trip load. This restriction specifies that point to point service can be provided on occasion from one consignor to one consignee where regular service is not provided, with a trip permit, or when certain commodities are carried.[3] Also, carriers may be allowed to haul surplus loads for other P.S.V. carriers. Together, these restrictions appear 122 times, with 105 of them applying to intra-Manitoba operating authorities.

A carrier's operating authority may specify the allowed size of vehicle or weight of load to be carried. For example, a carrier may be restricted to using vehicles with gross vehicle weight below a certain limit, or limited to having loads below a certain weight. As well, an authority may specify truckload hauls only. These types of restrictions are experienced 78 times, with 42 being on interprovincial authorities and 27 on intraprovincial authorities.

The final type of restriction to be discussed is that restricting the type of equipment which can be used for transporting freight under a given operating authority. The restriction to using tank-type vehicles appears 31 times, while another 26 times the restriction of not using tank-type vehicles applies. Lowbed and hopper bottom equipment are each specified for use 25 times, with regular trailers mentioned nine times. Other types of equipment are specified for use 43 times and specified not to be used 11 times. These other types include those equipped with special loading and unloading devices, temperature controlled trailers and other special equipment types.

3. Rule 11, Schedule D. Rules of Carriage, Board Order 5/80

A total of 624 restrictions to operating authorities were recorded, of which 275 were related to intra-Manitoba authorities, 264 to interprovincial authorities and only 85 to international authorities.

The intraprovincial market can be examined in more detail by identifying the number of for-hire carriers serving selected Manitoba communities to/from the distribution centers of Winnipeg and Brandon. The pattern of truck service within Manitoba can be characterized as a hub-and-spoke network centered on Winnipeg and to a lesser extent Brandon. Service information is drawn from the Manitoba Official Ship by Truck Directory, which contains one section listing Manitoba points served by P.S.V. operators from Winnipeg and another section for Manitoba points served by P.S.V. operators from Brandon. For Winnipeg, separate counts are made for general freight carriers and all types of freight carriers. The total of all types of freight carriers is the total number of carriers listed as serving the particular community. This may not be a complete list, but it is useful for comparison purposes. This information appears in Table 5. The communities served have been ordered by decreasing population size.

## TABLE 5

### Number of For-Hire Freight Carriers by Community, 1981-82[1]

| Community | Population[2] (1981) | Number of Freight Carriers Serving Community: General Freight Carriers From/to Wpg. | All Types of Freight Carriers From/To Wpg. | All Types of Freight Carriers From/to Brandon |
|---|---|---|---|---|
| Brandon | 36242 | 2 | 3 | 0 |
| Thompson | 14288 | 2 | 2 | 1 |
| Portage la Prairie | 13086 | 3 | 5 | 1 |
| Selkirk | 10037 | 2 | 3 | 0 |
| Dauphin | 8971 | 2 | 3 | 1 |
| Flin Flon | 7894 | 1 | 1 | 1 |
| Steinbach | 6676 | 1 | 2 | 0 |
| The Pas | 6390 | 2 | 2 | 1 |
| Winkler | 5046 | 3 | 4 | 1 |
| Morden | 4579 | 2 | 3 | 1 |
| Swan River | 3782 | 1 | 1 | 1 |
| Neepawa | 3425 | 4 | 5 | 2 |
| Virden | 2940 | 1 | 4 | 3 |
| Altona | 2757 | 1 | 2 | 1 |
| Minnedosa | 2637 | 4 | 5 | 2 |
| Beausejour | 2462 | 2 | 3 | 0 |
| Carman | 2408 | 1 | 3 | 1 |
| Leaf Rapids | 2356 | 2 | 2 | 0 |
| Killarney | 2342 | 1 | 2 | 1 |
| Stonewall | 2210 | 1 | 2 | 0 |
| Roblin | 1953 | 1 | 2 | 1 |
| Snow Lake | 1853 | 2 | 2 | 1 |
| Souris | 1731 | 1 | 2 | 2 |
| Boissevain | 1660 | 1 | 2 | 1 |
| Russell | 1660 | 1 | 2 | 1 |
| Morris | 1570 | 1 | 3 | 1 |
| Gimli | 1550 | 2 | 3 | 0 |
| Carberry | 1510 | 2 | 3 | 1 |
| Ste. Anne | 1338 | 1 | 2 | 0 |

TABLE 5 Cont'd

Number of For-Hire Freight Carriers by Community, 1981-82

| Community | Population (1981) | Number of Freight Carriers Serving Community: General Freight Carriers From/to Wpg. | All Types of Freight Carriers From/to Wpg. | All Types of Freight Carriers From/to Brandon |
|---|---|---|---|---|
| Niverville | 1329 | 1 | 2 | 0 |
| Melita | 1156 | 1 | 2 | 2 |
| Deloraine | 1136 | 2 | 3 | 1 |
| Rivers | 1107 | 1 | 2 | 1 |
| Ste Rose du Lac | 1090 | 1 | 2 | 1 |
| Grandview | 1013 | 1 | 2 | 1 |
| Lac du Bonnet | 985 | 1 | 2 | 0 |
| Arborg | 974 | 1 | 2 | 0 |
| Gladstone | 964 | 2 | 3 | 1 |
| Teulon | 925 | 1 | 2 | 0 |
| St. Pierre - Jolys | 919 | 1 | 2 | 0 |
| Birtle | 887 | 1 | 2 | 1 |
| Manitou | 861 | 1 | 2 | 1 |
| Winnipegosis | 855 | 1 | 1 | 0 |
| Pilot Mound | 838 | 1 | 3 | 2 |
| Shoal Lake | 835 | 2 | 3 | 2 |
| Gilbert Plains | 812 | 2 | 2 | 1 |
| MacGregor | 795 | 2 | 3 | 1 |
| Emerson | 762 | 1 | 2 | 0 |
| Treherne | 743 | 1 | 2 | 1 |
| Glenboro | 741 | 1 | 2 | 1 |
| Hamiota | 728 | 1 | 2 | 1 |
| Rossburn | 696 | 2 | 3 | 3 |
| Powerview | 691 | 1 | 2 | 1 |
| Riverton | 657 | 1 | 2 | 0 |
| Minitonas | 628 | 1 | 1 | 1 |
| Notre Dame de Lourdes | 627 | 1 | 2 | 1 |
| McCreary | 618 | 1 | 2 | 1 |
| Somerset | 596 | 1 | 2 | 1 |
| Plum Coulee | 592 | 1 | 2 | 1 |
| St. Claude | 592 | 1 | 3 | 1 |
| Winnipeg Beach | 565 | 1 | 3 | 0 |
| Gretna | 545 | 1 | 2 | 1 |

TABLE 5 Cont'd

Number of For-Hire Freight Carriers by Community, 1981-82

| Community | Population (1981) | Number of Freight Carriers Serving Community: General Freight Carriers From/to Wpg. | All Types of Freight Carriers From/to Wpg. | All Types of Freight Carriers From/to Brandon |
|---|---|---|---|---|
| Erickson | 540 | 2 | 3 | 3 |
| Elkhorn | 509 | 1 | 1 | 3 |
| Wawanesa | 492 | 1 | 2 | 1 |
| Hartney | 490 | 3 | 4 | 2 |
| Crystal City | 489 | 1 | 2 | 2 |
| Ethelbert | 474 | 1 | 1 | 1 |
| Binscarth | 472 | 1 | 2 | 1 |
| Bowsman | 454 | 1 | 1 | 0 |
| Benito | 441 | 1 | 1 | 1 |
| Rapid City | 431 | 1 | 2 | 1 |
| St. Lazare | 414 | 1 | 1 | 1 |
| Cartwright | 384 | 1 | 1 | 1 |
| Oak Lake | 369 | 1 | 2 | 1 |
| Garson | 318 | 1 | 2 | 0 |
| Waskada | 239 | 2 | 2 | 1 |
| Napinka | 132 | 1 | 1 | 1 |

1. Source: Manitoba Trucking Association, Manitoba Official Ship by Truck Directory, 1981-82

2. Source: Manitoba Bureau of Statistics, Manitoba Census Population 1971, 1976, 1981 Final Counts

Of the 78 selected communities served to/from Winnipeg by general freight carriers, Neepawa and Minnedosa have the most carriers serving them with four each. Three carriers serve Portage la Prairie, Winkler and Hartney to/from Winnipeg. Nineteen communities, including Brandon and Thompson, are served by two general freight carriers to/from Winnipeg. Fifty-four communities have one general freight carrier serving them to/from Winnipeg. From this discussion, it appears that the number of carriers serving a community bears little relation to the community population. Similar patterns hold for the total of all types of freight carriers to/from Winnipeg and to/from Brandon. There must be factors other than population which determine the number of carriers serving a community.

### 1.2.2 For-Hire Trucking Company Operations Information

Statistics Canada conducts two surveys relating to for-hire truck carriers: The Motor Carrier Freight and Household Goods Movers Survey of carrier operations and the For-Hire survey of freight movement. The information provided by these surveys is used here to provide a description of the Manitoba for-hire industry.

It is important to keep the survey limitations in mind while examining the statistics produced from these surveys. First, only firms with reported gross annual operating revenue from the intercity movement of freight exceeding $100,000 are included. Firms with revenue below $100,000 are thought to represent about 20% of the for-hire industry in Canada in terms of number of firms. The percentage of firms in this category in Manitoba could be somewhat

higher. Although these small carriers are significant in number, their importance in terms of tonnage carried and revenue earned is considerably less.

Approximately 10% of the for-hire carriers in Canada with revenue greater than $100,000 are not included in the survey universe. As well, establishments which are engaged predominantly in some other industry and which could not provide separate statistics for their motor carrier operations have not been included in the survey results. Other firms refused to provide information or could not be reached. Thus, a further 10% of the firms included in the survey universe are not included in the survey results. In total, the published data excludes 20% of the for-hire carriers with revenue exceeding $100,000 and excludes all carriers with revenue below $100,000.

Table 6 contains a summary of operations of the Manitoba-based for-hire carriers for 1980. Of 194 carriers reporting, 70% were Class III freight carriers. However, the Class I freight carriers are dominant by every other measure, accounting for 80% of operating revenue, 78% of total assets, 79% of equipment operated, 72% of total employees and 64% of estimated distance travelled. This occurs even though Class I freight carriers represent only 8% of the total number of carriers included in the tabulations.

Table 6

Manitoba-Based For-Hire Trucking Industry Statistics, 1980[1]

| | Motor Carriers - Freight | | | Household Goods Movers[5] | Total |
|---|---|---|---|---|---|
| | Class I[2] | Class II[3] | Class III[4] | Class I, II and III | Class I, II and III |
| Number of Carriers Reporting | 16 | 22 | 136 | 20 | 194 |
| Total Operating Revenues ($) | 256,456,782 | 21,827,807 | 30,035,607 | 13,815,246 | 322,135,442 |
| Total Operating Expenses ($) | 243,963,303 | 22,117,471 | 27,696,180 | 13,269,346 | 307,046,300 |
| Total Assets ($) | 130,591,529 | 13,180,615 | 17,887,236 | 5,739,115 | 167,398,495 |
| Total Equipment Operated (No. of trucks and trailers owned and leased) | 7,957 | 651 | 1,100 | 306 | 10,014 |
| Total Employees (No.) | 4,076 | 421 | 747 | 395 | 5,639 |
| Estimated Distance Travelled (km.) | 118,178,419 | 22,337,180 | 38,409,183 | 4,499,684 | 183,424,466 |

1. Source: Statistics Canada 53-222 Motor Carriers-Freight and Household Goods Movers, 1980
2. Class I carriers have gross annual operating revenues over $2,000,000.
3. Class II carriers have gross annual operating revenues of $500,000 to $1,999,999.
4. Class III carriers have gross annual operating revenues of $100,000 to $499,999.
5. Household Goods Movers are establishments whose major activity, measured in terms of gross annual operating revenue, is the moving of used uncrated household goods.

The structure of the for-hire trucking industry can also be described by the sizes of truck fleets operated by carriers in Manitoba, derived from the December, 1982 motor vehicle registration file for Manitoba. This information is reproduced in Table 7. Trucks with gross vehicle weights of 4,000 kilograms or less are excluded from consideration since these small vehicles are not considered to be extensively used for transporting freight.

Of the 324 for-hire carriers with Manitoba registrations, 217 or 67% had one to three trucks. This illustrates that the majority of for-hire firms in Manitoba are small in size. At the other extreme, 10 carriers or 3% of the carriers had over 30 trucks, indicating that there are a few large fleets in the province. The average truck fleet size is 6.2 trucks. This is found by dividing the total number of registered trucks by the total number of carriers.

A further disaggregation of fleets into trucks licenced for different uses is also contained in Table 7. Of the total of 1,996 public service trucks of over 4,000 kg licenced, 1,593 or 80% have extraprovincial (P4) licences. Fleets with more than 30 trucks contain 738 or 46% of the extraprovincial trucks and only 38 or 10% of the intraprovincial (P1) trucks, while fleets of 3 trucks or less contain 113 or 7% of the extraprovincial trucks and 224 or 57% or the intraprovincial trucks. This indicates that extraprovincial trucks are mainly in large fleets while intraprovincial trucks are mainly in small fleets.

The final observation from Table 7 concerns other types of public service trucks. Included here are trailers (P3) other than those included in tractor-trailer units, intra-Manitoba drive-away trucks (P5)

Table 7

Manitoba For-Hire Truck Fleets, Over 4,000 kilograms, 1982[1]

| Fleet Size | Number of Fleets | Number of Trucks: Intra-Manitoba (Class P1) | Extraprovincial (Class P4) | Other Types[2] (Class P3, P5 and P6) | Total Number of Trucks |
|---|---|---|---|---|---|
| 1 | 126 | 85 | 41 | 0 | 126 |
| 2 | 60 | 95 | 23 | 2 | 120 |
| 3 | 31 | 44 | 49 | 0 | 93 |
| 4 | 20 | 22 | 58 | 0 | 80 |
| 5 | 13 | 18 | 47 | 0 | 65 |
| 6 | 18 | 24 | 81 | 3 | 108 |
| 7 | 5 | 6 | 29 | 0 | 35 |
| 8 | 2 | 8 | 8 | 0 | 16 |
| 9 | 6 | 0 | 54 | 0 | 54 |
| 10 | 6 | 20 | 40 | 0 | 60 |
| 11 | 3 | 11 | 22 | 0 | 33 |
| 12 | 5 | 0 | 60 | 0 | 60 |
| 13-15 | 5 | 0 | 64 | 4 | 68 |
| 16-20 | 6 | 1 | 107 | 0 | 108 |
| 21-25 | 6 | 21 | 114 | 0 | 135 |
| 26-30 | 2 | 0 | 58 | 1 | 59 |
| 31-35 | 2 | 0 | 67 | 0 | 67 |
| 36-40 | 1 | 37 | 0 | 0 | 37 |
| Over 40 | 7 | 1 | 671 | 0 | 672 |
| Total | 324 | 393 | 1,593 | 10 | 1,996 |

1. Source: Manitoba vehicle registration file, December 1982.
2. P3 - Trailers
   P5 - Intra-Manitoba drive-away
   P6 - Extraprovincial drive-away

and extraprovincial drive-away trucks (P6). Drive-aways are mainly tow trucks. There are only 10 vehicles of these types with gross vehicle weight exceeding 4,000 kilograms, and all of them are trailers.

Table 8 provides the distribution of gross vehicle weights of Manitoba for-hire trucks. In producing the fleet information for Table 7, trucks with gross vehicle weights of 4,000 kilograms or less were excluded. From Table 8, it can be seen that these light trucks represent 6% of all for-hire trucks.

The most striking fact apparent from Table 8 is the concentration of large for-hire trucks. Overall, 72% of for-hire trucks exceed 32,000 kg. gross vehicle weight. The corresponding figures for intra-Manitoba trucks and extraprovincial trucks are 38.5% and 82.7% respectively. This disparity illustrates that trucks licenced for extraprovincial operations are on average much larger than those licenced only for intraprovincial operation. The other types of vehicles, which include drive-away trucks and trailers, are predominantly small. A total of 78% of these are in the lightest weight category.

## Table 8

## For-Hire Trucks by Gross Vehicle Weight, 1982[1]

| Gross Vehicle Weight Range (kilograms) | Number and Percentage of PSV Vehicles by Class | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Intra-Manitoba (Class P1) | | Extraprovincial (Class P4) | | Other Types[2] (Class P3, P5 and P6) | | All PSV Classes | |
| | No. | % | No. | % | No. | % | No. | % |
| Under 4,001 | 46 | 10.5 | 47 | 2.9 | 35 | 77.8 | 128 | 6.0 |
| 4,001-6,000 | 9 | 2.1 | 10 | 0.6 | 3 | 6.7 | 22 | 1.0 |
| 6,001-8,000 | 5 | 1.1 | 6 | 0.4 | 5 | 11.1 | 16 | 0.8 |
| 8,001-10,000 | 23 | 5.2 | 22 | 1.3 | 1 | 2.2 | 46 | 2.2 |
| 10,001-12,000 | 29 | 6.6 | 39 | 2.4 | 1 | 2.2 | 69 | 3.3 |
| 12,001-14,000 | 34 | 7.7 | 28 | 1.7 | 0 | 0.0 | 62 | 2.9 |
| 14,001-16,000 | 16 | 3.6 | 4 | 0.2 | 0 | 0.0 | 20 | 0.9 |
| 16,001-18,000 | 2 | 0.5 | 5 | 0.3 | 0 | 0.0 | 7 | 0.3 |
| 18,001-20,000 | 36 | 8.2 | 22 | 1.3 | 0 | 0.0 | 58 | 2.7 |
| 20,001-24,000 | 52 | 11.9 | 31 | 1.9 | 0 | 0.0 | 83 | 3.9 |
| 24,001-28,000 | 7 | 1.6 | 38 | 2.3 | 0 | 0.0 | 45 | 2.1 |
| 28,001-32,000 | 11 | 2.5 | 32 | 2.0 | 0 | 0.0 | 43 | 2.0 |
| 32,001-36,000 | 17 | 3.9 | 32 | 2.0 | 0 | 0.0 | 49 | 2.3 |
| 36,001-40,000 | 117 | 26.6 | 817 | 49.8 | 0 | 0.0 | 934 | 44.0 |
| 40,001-48,000 | 2 | 0.5 | 100 | 6.1 | 0 | 0.0 | 102 | 4.8 |
| Over 48,000 | 33 | 7.5 | 407 | 24.8 | 0 | 0.0 | 440 | 20.7 |
| Total[3] | 439 | 100.0 | 1,640 | 100.0 | 45 | 100.0 | 2,124 | 100.0 |

1. Source: Manitoba vehicle registration file, December 1982.
2. P3 - Trailers
   P5 - Intra-Manitoba drive-away
   P6 - Extraprovincial drive-away
3. Totals may not add properly due to rounding.

Statistics Canada collects information on truck equipment as part of their survey of for-hire carrier operations. For Manitoba, 194 carriers were included in the for-hire survey in 1980. The number of trucks owned and leased by type is contained in Table 9. Equipment operated by broker operators, or trucking subcontractors, is excluded from this table.

From these figures, it can be seen that there are approximately twice as many truck tractors as straight trucks. Also, semi-trailers outnumber truck tractors by almost three to one. The distribution of leased equipment is somewhat different than that of the owned equipment. Leased equipment consists mainly of semi-trailers, with smaller proportions of truck tractors and straight trucks leased than owned.

It is important to note that the figures presented here include all types of trucks owned or leased by for-hire carriers, excluding brokers. Any commercial trucks or other trucks owned by for-hire carriers will be included. It is fairly common for for-hire carriers to own trucks other than public service vehicles.

Table 9

Manitoba For-Hire Carrier Equipment, 1980[1]

| Equipment Type | Owned | | Leased | | Total | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Straight Trucks | 1071 | 11.6 | 24 | 2.9 | 1095 | 10.9 |
| Truck Tractors | 1983 | 21.6 | 174 | 20.9 | 2157 | 21.5 |
| Semi-Trailers | 5417 | 59.0 | 628 | 75.5 | 6045 | 60.4 |
| Full Trailers | 71 | 0.8 | 0 | 0.0 | 71 | 0.7 |
| Other | 640 | 7.0 | 6 | 0.7 | 646 | 6.5 |
| Total | 9182 | 100.0 | 832 | 100.0 | 10,014 | 100.0 |

1. Source: Statistics Canada, 53-222, Motor Carriers - Freight and Household Goods Movers, 1980

## 1.2.3 For-Hire Carrier Financial Information

### 1.2.3.1 Provincial Comparisons of For-Hire Carrier Finances

The Statistics Canada financial data collected from for-hire carriers can be utilized to examine carrier financial conditions in different provinces. Table 10 contains a summary of operating revenues and expenses for for-hire freight carriers surveyed in 1980. Household goods movers have been excluded here. Again, the limitations of the Statistics Canada surveys must be kept in mind when examining this financial information.

Manitoba domiciled carriers represent approximately 4% of Canada for-hire carriers, roughly proportional to Manitoba's share of Canada's population. The average revenue per firm is $1.77 million for Manitoba, somewhat higher than the national average of $1.21 million. No province has a higher average than Manitoba, with the $1.62 million average revenue for Ontario carriers being the second highest. Similarly, the average operating expense of $1.69 million for Manitoba is higher than the national average of $1.17 million and is the highest in Canada. Second highest is the $1.56 million average of Ontario truckers.

The operating ratio is the proportion of total operating revenues absorbed by total operating expenses. It is one measure of profitability of firms, with a ratio of less than one indicating profits. Manitoba for-hire carriers' operating ratio of 0.953 is better than the

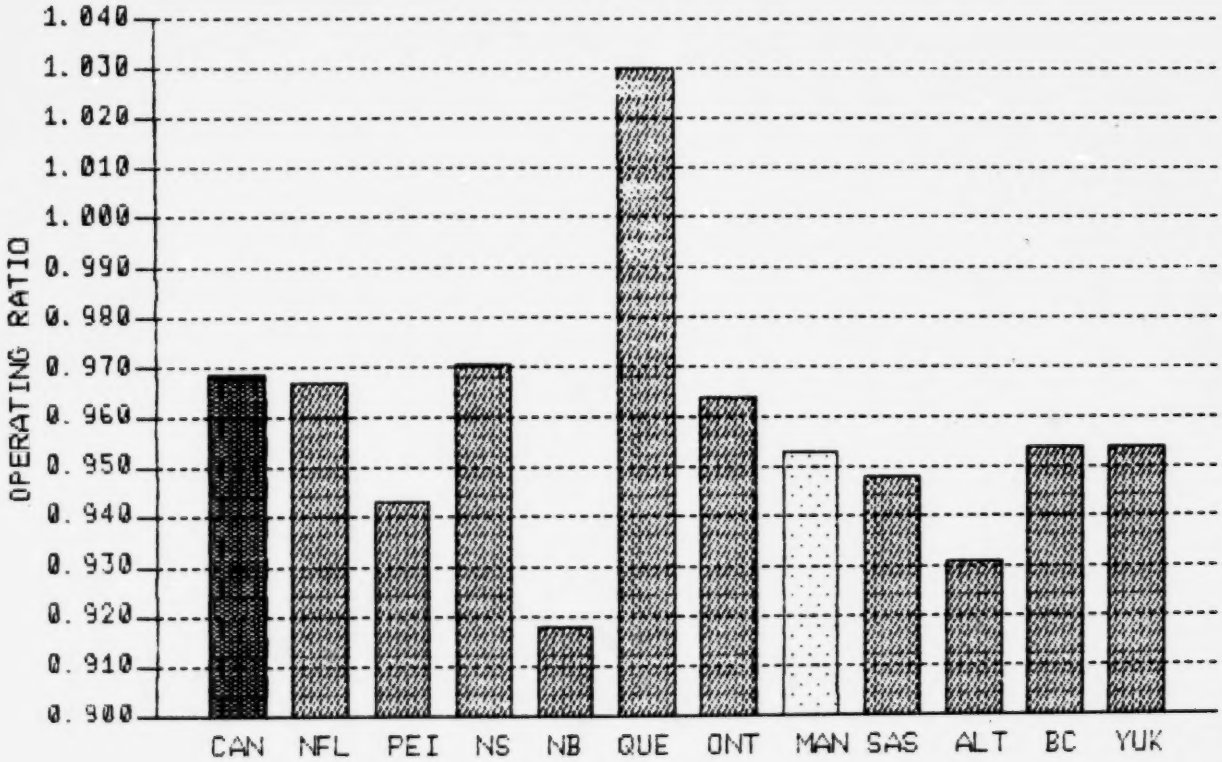
Table 10

Financial Summary of For-Hire Carriers by Province, 1980[1]

| Location | Number of Firms Reporting | Operating Revenue ($000's) Total | Operating Revenue ($000's) Per Firm | Operating Expenses ($000's) Total | Operating Expenses ($000's) Per Firm | Net Operating Revenue ($000's) Total | Net Operating Revenue ($000's) Per Firm | Operating[2] Ratio |
|---|---|---|---|---|---|---|---|---|
| Canada | 4320 | 5,223,805 | 1209.2 | 5,060,138 | 1171.3 | 163,667 | 37.9 | 0.969 |
| Newfoundland | 74 | 36,843 | 497.9 | 35,622 | 481.4 | 1,221 | 16.5 | 0.967 |
| P.E.I. | 28 | 13,886 | 495.9 | 13,098 | 467.8 | 788 | 28.1 | 0.943 |
| Nova Scotia | 130 | 90,029 | 692.5 | 87,430 | 672.5 | 2,599 | 20.0 | 0.971 |
| New Brunswick | 116 | 143,522 | 1237.3 | 131,776 | 1136.0 | 11,746 | 101.3 | 0.918 |
| Quebec | 1042 | 1,086,934 | 1043.1 | 1,119,358 | 1074.2 | (32,424)[3] | (31.1) | 1.030 |
| Ontario | 1122 | 1,817,507 | 1619.9 | 1,752,707 | 1562.1 | 64,800 | 57.8 | 0.964 |
| MANITOBA | 174 | 308,320 | 1772.0 | 293,777 | 1688.4 | 14,543 | 83.6 | 0.953 |
| Saskatchewan | 175 | 106,914 | 610.9 | 101,388 | 579.9 | 5,526 | 31.5 | 0.948 |
| Alberta | 806 | 892,869 | 1107.8 | 831,096 | 1031.1 | 61,773 | 76.7 | 0.931 |
| B.C. | 639 | 719,500 | 1126.0 | 686,750 | 1074.7 | 32,750 | 51.3 | 0.954 |
| Yukon | 14 | 7,481 | 534.4 | 7,136 | 509.7 | 345 | 24.7 | 0.954 |
| N.W.T. | - | - | - | - | - | - | - | - |

1. Source: Statistics Canada, 53-222, Motor Carriers - Freight and Household Goods Movers, 1980.
2. Operating Ratio = Total Operating Expenses ÷ Total Operating Revenue.
3. Negative net operating revenue is shown in brackets.

FOR-HIRE CARRIER OPERATING RATIOS BY PROVINCE,
CLASS I, II AND III CARRIERS, 1980.



national average of 0.969. However, New Brunswick, P.E.I., Saskatchewan and Alberta carriers have better operating ratios than Manitoba carriers. No attempt has been made to determine whether differences in these ratios are statistically significant. These operating ratios are displayed in the accompanying histogram.

The relative importance of for-hire trucking in comparison to provincial Gross Domestic Product is calculated in Table 10. For each province, the share of trucking revenue is divided by the share of GDP to produce a ratio. Where this ratio is close to unity, it indicates that trucking activity share is relatively in proportion to GDP share. This is the case for P.E.I., Quebec, Ontario and British Columbia. A ratio significantly greater than unity indicates that trucking generates a higher than proportional share of revenue. This situation exists in Manitoba, New Brunswick and Alberta. These provinces either contain trucking companies who "export" services to other provinces or have conditions favoring relatively higher levels of trucking activity than other provinces. A ratio significantly lower than unity occurs in provinces which either "import" trucking services or have conditions unfavourable to trucking activity. This latter situation occurs in Newfoundland, Nova Scotia, Saskatchewan, Yukon and the Northwest Territories.

Table 11

Comparing For-Hire Trucking Revenue to Provincial GDP, 1980

| Location | (1) Share of All Provinces' For-Hire Carrier Operating Revenue[1] (%) | (2) Share of All Provinces' Gross Domestic Product[2] (%) | (3)=(1)÷(2) Ratio of Revenue Share to GDP Share | Ratio Rank |
|---|---|---|---|---|
| Newfoundland | 0.71 | 1.25 | 0.568 | 9 |
| P.E.I. | 0.27 | 0.26 | 1.038 | 5 |
| Nova Scotia | 1.72 | 2.16 | 0.796 | 8 |
| New Brunswick | 2.75 | 1.76 | 1.563 | 2 |
| Quebec | 20.81 | 22.79 | 0.913 | 7 |
| Ontario | 34.79 | 37.57 | 0.926 | 6 |
| Manitoba | 5.90 | 3.73 | 1.582 | 1 |
| Saskatchewan | 2.05 | 4.38 | 0.468 | 10 |
| Alberta | 17.09 | 13.51 | 1.265 | 3 |
| British Columbia | 13.77 | 12.27 | 1.122 | 4 |
| Yukon and N.W.T. | 0.14 | 0.31 | 0.452 | 11 |
| TOTAL | 100.00 | 100.00 | 1.000 | |

1. Source: Statistics Canada 53-222 Motor Carriers - Freight and Household Goods Movers, 1980.
2. Source: Statistics Canada 13-213 Provincial Economic Accounts, 1965-1980.
3. Gross Domestic Product at market prices, 1980 (millions of dollars).

The 1980 for-hire carrier financial summary is disaggregated into three revenue classes and presented in Table 12A, B and C. Again, household goods movers have been excluded. The majority of the 174 Manitoba carriers, (136 or 78%), are in Class III, which includes firms with annual operating revenues of $100,000 to $499,999. Class II firms having annual revenues of $500,000 to $1,999,999 contain 22 or 13% of Manitoba for-hire carriers. Class I consists of 16 or 9% of carriers with annual revenues of $2,000,000 or more. Intra-Manitoba carriers with annual operating revenue below $100,000 are discussed below in section 1.2.3.2, but are excluded here.

The 16 Manitoba Class I carriers represent 9% of Class I, II and III for-hire carriers domiciled in Manitoba. In 1980, these carriers generated $256,457,000 of operating revenue which constitutes 83.2% of total operating revenue generated in that year by all Class I, II and III Manitoba domiciled for-hire carriers (excluding household goods carriers).

Table 13 contains further 1980 information for Class I, II and III carriers separately for comparison between provinces. The first comparison is on the percentage of firms in each class. About 9.2% of Manitoba carriers are in Class I. This is near the national average of 8.6% and exceeded only by New Brunswick and Ontario. Only 12.6% of Manitoba carriers are in Class II. This is well below the 20% Canadian average and lower than all other provinces. Class III carriers represent 78.2% of Manitoba carriers, which is

## TABLE 12A

### Financial Summary of For-Hire Carriers by Class by Province, 1980 [1]

### Class I (more than $2 million revenue)

| Location | Number of Firms Reporting | Total Operating Revenue ($000's) | Total Operating Expenses ($000's) | Net Operating Revenue ($000's) | Operating Ratio |
|---|---|---|---|---|---|
| Canada | 372 | 3,503,568 | 3,442,901 | 60,667 | 0.983 |
| Newfoundland | 3 | 11,765 | 11,134 | 631 | 0.946 |
| P.E.I. | - | - | - | - | - |
| Nova Scotia | 8 | 44,704 | 43,908 | 796 | 0.982 |
| New Brunswick | 12 | 105,662 | 96,605 | 9,057 | 0.914 |
| Quebec | 88 | 696,605 | 751,826 | (55,221)[2] | 1.079 |
| Ontario | 130 | 1,373,286 | 1,335,434 | 37,852 | 0.972 |
| MANITOBA | 16 | 256,457 | 243,963 | 12,494 | 0.951 |
| Saskatchewan | 7 | 35,345 | 34,058 | 1287 | 0.964 |
| Alberta | 67 | 542,809 | 507,585 | 35,224 | 0.935 |
| B.C.[3] | 41 | 436,933 | 418,387 | 18,546 | 0.958 |
| Yukon[3] | - | - | - | - | - |
| N.W.T.[3] | - | - | - | - | - |

1. Source: Statistics Canada 53-222, Motor Carriers - Freight and Household Goods Movers, 1980

2. Negative net operating revenue is shown in brackets.

3. B.C., Yukon and N.W.T. are grouped to meet confidentiality requirements.

## TABLE 12 B

### Financial Summary of For-Hire Carriers by Class by Province, 1980 [1]

### Class II ($500,000 to $1,999,999 revenue)

| Location | Number of Firms Reporting | Total Operating Revenue ($000's) | Total Operating Expenses ($000's) | Net Operating Revenue ($000's) | Operating Ratio |
|---|---|---|---|---|---|
| Canada | 864 | 936,715 | 891,720 | 44,995 | 0.952 |
| Newfoundland | 10 | 11,315 | 11,202 | 113 | 0.990 |
| P.E.I. | 7 | 7,762 | 7,528 | 234 | 0.970 |
| Nova Scotia | 23 | 21,613 | 21,156 | 457 | 0.979 |
| New Brunswick | 20 | 19,103 | 17,745 | 1,358 | 0.929 |
| Quebec | 212 | 221,071 | 211,499 | 9,572 | 0.957 |
| Ontario | 243 | 252,770 | 238,341 | 14,429 | 0.943 |
| MANITOBA | 22 | 21,828 | 22,117 | (289) | 1.013 |
| Saskatchewan | 40 | 40,019 | 38,491 | 1,528 | 0.962 |
| Alberta | 152 | 184,644 | 173,065 | 11,579 | 0.937 |
| B.C. | 131 | 152,189 | 146,279 | 5,910 | 0.961 |
| Yukon & N.W.T. | 4 | 4,400 | 4,298 | 102 | 0.977 |

TABLE 12C

Financial Summary of For-Hire Carriers by Class by Province, 1980 [1]

Class III ($100,000 to $499,999 revenue)

| Location | Number of Firms Reporting | Total Operating Revenue ($000's) | Total Operating Expenses ($000's) | Net Operating Revenue ($000's) | Operating Ratio |
|---|---|---|---|---|---|
| Canada | 3,084 | 783,521 | 725,516 | 58,005 | 0.926 |
| Newfoundland | 61 | 13,762 | 13,286 | 476 | 0.965 |
| P.E.I. | 21 | 6,123 | 5,570 | 553 | 0.910 |
| Nova Scotia | 99 | 23,712 | 22,366 | 1,346 | 0.943 |
| New Brunswick | 84 | 18,757 | 17,426 | 1,331 | 0.929 |
| Quebec | 742 | 169,258 | 156,033 | 13,225 | 0.922 |
| Ontario | 749 | 191,450 | 178,932 | 12,518 | 0.935 |
| MANITOBA | 136 | 30,036 | 27,696 | 2,340 | 0.922 |
| Saskatchewan | 128 | 31,549 | 28,839 | 2,710 | 0.914 |
| Alberta | 587 | 165,415 | 150,445 | 14,970 | 0.910 |
| B.C. | 467 | 130,377 | 122,085 | 8,292 | 0.936 |
| Yukon & N.W.T. | 10 | 3,081 | 2,839 | 242 | 0.921 |

Table 13

Percentages of Firms, Total Operating Revenue and Net Operating Revenue by Location and Revenue Class, For-Hire Carriers, 1980 [1]

| Location | Percentage of Firms | | | Percentage of Total Operating Revenue | | | Percentage of Net Operating Revenue | | |
|---|---|---|---|---|---|---|---|---|---|
| | Class I | Class II | Class III | Class I | Class II | Class III | Class I | Class II | Class III |
| Canada | 8.6 | 20.0 | 71.4 | 67.1 | 17.9 | 15.0 | 37.1 | 27.5 | 35.4 |
| Newfoundland | 4.1 | 13.5 | 82.4 | 31.9 | 30.7 | 37.4 | 51.7 | 9.3 | 39.0 |
| P.E.I. | 0.0 | 25.0 | 75.0 | 0.0 | 55.9 | 44.1 | 0.0 | 29.7 | 70.2 |
| Nova Scotia | 6.2 | 17.7 | 76.2 | 49.7 | 24.0 | 26.3 | 30.6 | 17.6 | 51.8 |
| New Brunswick | 10.3 | 17.2 | 72.4 | 73.6 | 13.3 | 13.1 | 77.1 | 11.6 | 11.3 |
| Quebec | 8.4 | 20.3 | 71.2 | 64.1 | 20.3 | 15.6 | 170.3[2] | -29.5[2] | -40.8[2] |
| Ontario | 11.6 | 21.7 | 66.8 | 75.6 | 13.9 | 10.5 | 58.4 | 22.3 | 19.3 |
| MANITOBA | 9.2 | 12.6 | 78.2 | 83.2 | 7.1 | 9.7 | 85.9 | -2.0 | 16.1 |
| Saskatchewan | 4.0 | 22.9 | 73.1 | 33.1 | 37.4 | 29.5 | 57.0 | 18.7 | 24.2 |
| Alberta | 8.3 | 18.9 | 72.8 | 60.8 | 20.7 | 18.5 | 56.6 | 18.0 | 25.3 |
| B.C. | 6.3 | 20.5 | 73.1 | 60.7 | 21.2 | 18.1 | 0.0 | 29.7 | 70.3 |
| Yukon[3] | 0.0 | 28.6 | 71.4 | - | - | - | - | - | - |
| N.W.T.[3] | - | - | - | - | - | - | - | - | - |

1. Source: Statistics Canada 53-222, Motor Carriers - Freight and Household Goods Movers, 1980.
2. Overall net operating revenue is negative for Quebec, reversing the normal meaning of the arithmatic signs. Class I carriers had negative net operating revenue, producing a positive percentage (-55,221/-32,424) x 100 = 170.3% Quebec Class I carriers' losses were 170.3% of the overall negative net operating revenue. Class II and Class III carriers experienced positive net operating revenue (or negative losses) equal in magnitude to 29.5% and 40.8% of overall net losses respectively.
3. The information is limited due to confidentiality constraints.

above the national average of 71.4% and exceeded only by Newfoundland. To summarize, the for-hire industry in Manitoba contains a relatively high proportion of large and small companies, with few of intermediate size.

The second comparison between provinces relates to the operating revenue split between classes. Class I carriers in Manitoba earn 83% of total operating revenue. This is a higher share than in any other province, and is much above the national average of 67%. Class II Manitoba carriers earn only 7% of total operating revenue, below the national average of 18% and the lowest of any province. The remaining 10% of operating revenue in Manitoba is earned by the Class III carriers. This is a lower share than in every other province. To summarize, Manitoba Class I carriers capture a relatively high proportion of total operating revenue.

The final comparison made here concerns the sharing of net operating revenue between carrier classes by province. Manitoba Class I carriers earned 86% of net operating revenue, slightly above their 83% share of total operating revenue. This contrasts sharply with the national situation where the Class I national average of 37% of net operating revenue is below the 67% of total operating revenue earned by Class I carriers. Class II carriers earned only -2% of net operating revenue in Manitoba, far below the national average. This indicates that these carriers as a group experienced losses in 1980. Class II carriers in Manitoba were the only Class II group which had negative net operating revenue. Manitoba Class III carriers earned the remaining 16% of net operating revenue, again

below the 35% national average. These figures all accentuate the predominance of Class I carriers in Manitoba as compared to the other provinces.

For each for-hire carrier class in each province, five financial measures have been calculated for 1980. These measures include the operating ratio, return on equity, return on investment in transportation property, investment turnover and profit margin. These measures are contained in Table 14 and are discussed in turn below.

The operating ratio is calculated as the total operating expenses divided by total operating revenues. It is a measure of the proportion of total revenue absorbed by expenses. It is one indicator of profitability. Manitoba Class I carriers have an operating ratio of 0.951, which is below the national average of 0.983. Class II carriers in Manitoba have an operating ratio above the national average. In fact, the ratio is greater than 1.0, indicating a net loss on operations. Manitoba Class III carriers have an operating ratio close to the national average.

Return on equity is found by dividing net income after taxes by equity. This provides a measure of the rate of return received by the owners on their investment. The return on equity for Manitoba Class I carriers is 0.196, lower than all except Nova Scotia, Quebec and Ontario, but above the national average. The return on equity of 0.146 for Manitoba Class II carriers is lower than all provinces except Nova Scotia and Quebec. Unfortunately, this measure could not be calculated for Class III carriers.

Table 14

Selected Financial Measures of For-Hire Carriers by Location and Class, 1980[1]

| Location | Operating Ratio[2] | | | Return on Equity[3] | | | Return on Investment in Transportation Property[4] | | | Investment Turnover[5] | | | Profit Margin[6] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Class I | Class II | Class III | Class I | Class II | Class III[7] | Class I | Class II | Class III | Class I | Class II | Class III | Class I | Class II | Class III[7] |
| Can. | 0.983 | 0.952 | 0.926 | 0.021 | 0.204 | | 0.061 | 0.170 | 0.265 | 1.61 | 1.70 | 1.76 | 0.003 | 0.037 | |
| Nfld. | 0.946 | 0.990 | 0.965 | 0.300 | 0.983 | | 0.510 | 0.073 | 0.118 | 3.34 | 2.71 | 1.74 | 0.029 | 0.006 | |
| P.E.I. | - | 0.970 | 0.910 | - | 0.213 | | - | 0.137 | 0.297 | - | 1.63 | 1.56 | - | 0.016 | |
| N.S. | 0.982 | 0.979 | 0.943 | 0.062 | 0.125 | | 0.099 | 0.069 | 0.293 | 2.39 | 1.52 | 2.15 | 0.005 | 0.028 | |
| N.B. | 0.914 | 0.929 | 0.929 | 0.302 | 0.302 | | 0.310 | 0.386 | 0.325 | 1.88 | 2.12 | 2.17 | 0.046 | 0.049 | |
| Que. | 1.079 | 0.957 | 0.922 | -0.406 | 0.102 | | -0.208 | 0.154 | 0.248 | 1.42 | 1.66 | 1.63 | -0.076 | 0.019 | |
| Ont. | 0.972 | 0.943 | 0.935 | 0.072 | 0.202 | | 0.105 | 0.167 | 0.276 | 1.56 | 1.46 | 1.76 | 0.013 | 0.052 | |
| Man. | 0.951 | 1.013 | 0.922 | 0.196 | 0.146 | | 0.212 | -0.040 | 0.242 | 1.96 | 1.66 | 1.68 | 0.022 | 0.019 | |
| Sask. | 0.964 | 0.962 | 0.914 | 0.314 | 0.276 | | 0.180 | 0.170 | 0.310 | 1.94 | 2.22 | 1.97 | 0.023 | 0.039 | |
| Alta. | 0.935 | 0.937 | 0.910 | 0.238 | 0.320 | | 0.194 | 0.223 | 0.229 | 1.57 | 1.70 | 1.70 | 0.043 | 0.049 | |
| B.C. | 0.958 | 0.961 | 0.936 | 0.224 | 0.246 | | 0.186 | 0.174 | 0.131 | 1.92 | 2.12 | 1.85 | 0.028 | 0.029 | |
| Yuk. & N.W.T. | - | 0.977 | 0.921 | - | 1.035 | | - | 0.147 | 0.164 | - | 1.89 | 1.03 | - | 0.036 | |

1. Source: Statistics Canada 53-222, Motor Carriers - Freight and Household Goods Movers, 1980
2. Operating Ratio = Total Operating Expenses/Total Operating Revenues
3. Return on Equity = Net Income After Taxes/Equity
4. Return on Investment in Transportation Property = Net Carrier Operating Revenue/ (Net Carrier Operating Property and Current Assets - Current Liabilities)
5. Investment Turnover = Total Operating Revenue/Total Assets
6. Profit Margin = Net Income After Taxes/Total Operating Revenue
7. Net Income After Taxes is not reported for Class III carriers

The return on investment in transportation property is intended to measure earnings on investments in transportation assets. It is calculated as net carrier operating revenue divided by net carrier operating property and current assets minus current liabilities. Manitoba Class I carriers show a return of 0.212, which is higher than all except Newfoundland and New Brunswick. The return for Class II carriers in Manitoba is -0.40, the only province showing a negative return. The Class III carriers in Manitoba had a return of 0.242. Newfoundland, B.C., Alberta, Yukon and N.W.T. Class III carriers had lower return on transportation property.

The investment turnover is derived as total operating revenue divided by total assets. It measures the effectiveness with which management used the capital resources at their disposal. For Class I carriers, the national average investment turnover was 1.61 in 1980. Manitoba Class I carriers had a turnover of 1.96, exceeded only by Newfoundland and Nova Scotia Class I carriers. Manitoba Class II carriers had a turnover of 1.66, which was near the 1.70 national average. The investment turnover for Class III carriers in Manitoba was 1.68, slightly below the national average of 1.76.

The profit margin is calculated by dividing net income by total operating revenue. This is used as an index of profitability primarily for comparison purposes. Manitoba Class I carriers had a profit margin of 0.022 in 1980, above the national average of 0.003 but lower than Class I carriers in Newfoundland, New Brunswick, Saskatchewan, B.C. and Alberta. Class II carriers in Manitoba

showed a slightly lower profit margin of 0.019 which was below the national average of 0.037. Class II carriers in Newfoundland and P.E.I. had lower profit margins, while these carriers in Quebec had the same profit margin as Manitoba carriers. Net income was unavailable for Class III carriers. Thus profit margin could not be calculated.

To summarize, these financial measures generally indicate that in 1980, Class I carriers in Manitoba were financially healthy relative to Class I carriers in other provinces. Manitoba Class II carriers were relatively less financially sound in 1980 than their counterparts in other provinces. Class III carriers in Manitoba appeared to be about equal to or perhaps slightly worse off financially than Class III carriers in other provinces.

### 1.2.3.2 Intra-Manitoba For-Hire General Freight Carrier Finances

The previous section used Statistics Canada information concerning Manitoba-domiciled carriers for comparisons with other provinces. These carriers included international, interprovincial and intraprovincial carriers. In this section, the intraprovincial general freight carriers are considered separately, based on the annual reports filed with the Motor Transport Board. Here, a carrier is considered to be an intraprovincial general freight carrier if at least 85% of revenue is generated through the intraprovincial carriage of general freight.

For the 1981 taxation year, 89 intraprovincial general freight carriers filed useful Annual Reports containing financial and operating data. These reports were analyzed to provide several useful comparisons. The information contained in the Annual Reports is provided by the carriers, and should be treated with some caution due to differing levels of sophistication in record keeping.

The first comparison is between profitable and unprofitable firms. Profitable firms are defined as those firms with operating revenue exceeding operating expense. Table 15 provides the comparison.

Of the 89 carriers, 75 or 84% were profitable and 14 or 16% were unprofitable. The average operating revenues and expenses were more than twice as great for profitable firms, while profitable firms had assets which were on average more than three times as great as unprofitable firms. All of these indicators show that unprofitable firms were generally smaller companies.

To gain further information, firms were categorized by revenue into four classes, with results summarized in Table 16. Class I carriers earn over $2,000,000 in annual revenue. Due to the small number of firms in this class, confidentiality restrictions necessitated the grouping of Class I carriers with Class II carriers. Class II carriers are those earning annual revenue of $500,000 to $1,999,999.

Table 15

Manitoba General Freight Carrier Financial Statistics, 1981[1]

| | Profitable Firms | Unprofitable Firms | Total |
|---|---|---|---|
| No. of firms | 75 | 14 | 89 |
| Total Operating Revenue ($) | 30,545,139 | 2,385,618 | 32,930,757 |
| Average Operating Revenue ($) | 407,269 | 170,401 | 370,009 |
| Total Operating Expense ($) | 28,652,416 | 2,576,209 | 31,228,625 |
| Average Operating Expense ($) | 382,032 | 184,015 | 350,883 |
| Total Operating[6] Margin ($) | 1,900,080 | -189,469 | 1,710,611 |
| Average Operating Margin ($) | 25,334 | -13,534 | 19,220 |
| Total Assets[7] ($) | 18,205,724[2] | 1,064,354 | 19,270,078[2] |
| Average Assets ($) | 271,727[2] | 76,025 | 237,902[2] |
| Estimated Total[7] Tonnage (tons) | 1,136,448 | 160,151 | 1,296,599 |
| Estimated Average Tonnage (tons) | 15,153 | 11,439 | 14,569 |
| Total Employees | 503 | 64 | 567 |
| Average Employees | 6.7 | 4.6 | 6.4 |
| Total Wages ($) | 7,834,556[3] | 769,120[5] | 8,603,676[4] |
| Average Total Wages ($) | 139,903[3] | 59,163[5] | 124,691[4] |
| Average Wages/ Employee ($) | 17,333[3] | 12,405[5] | 16,739[4] |
| Average Operating[8] Ratio | 0.938 | 1.079 | 0.948 |
| Average Return on[9] Investment | 0.098[2] | -0.178 | 0.083[2] |

1. Source: Annual Reports of Manitoba General Freight Carriers, 1981.
2. Excludes 8 non reporting carriers.
3. Excludes 19 non reporting carriers.
4. Excludes 20 non reporting carriers.
5. Excludes 1 non reporting carrier.
6. Total Operating Margin = Total Operating Revenue - Total Operating Expense.
7. Assets and Estimated Total Tonnage are to be treated with caution due to inaccuracies in reporting.
8. Operating Ratio = Total Operating Expense ÷ Total Operating Revenue.
9. Return on Investment = Operating Margin ÷ Assets.

Table 16

Manitoba General Freight Carrier Financial Statistics by Revenue Class, 1981 [1]

| | Class I and Class II over $500,000 revenue | Class III $100,000 - $499,999 revenue | Class IV less than $100,000 revenue | Total |
|---|---|---|---|---|
| Number of Firms | 12 | 37 | 40 | 89 |
| Percentage of Firms | 13.4% | 41.6% | 45.0% | 100.0% |
| Percentage Profitable | 91.7% | 81.1% | 85.0% | 84.0% |
| Percentage of Total Revenue | 69.3% | 24.7% | 6.0% | 100.0% |
| Percentage of Total Operating Margin [4] | 53.0% | 29.4% | 17.6% | 100.0% |
| Percentage of Total Assets [4] | 67.5% | 23.7% [2] | 8.8% [3] | 100.0% |
| Percentage of Total Estimated Tonnage [4] | 54.4% | 34.7% | 10.9% | 100.0% |
| Average Operating Ratio | 0.960 | 0.938 | 0.848 [4] | 0.948 |

1. Source: Annual Reports of Manitoba General Freight Carriers, 1981.
2. Excludes 2 non reporting carriers.
3. Excludes 6 non reporting carriers.
4. Treat with caution due to suspected reporting irregularities.

Together, Class I and II carriers comprise 13% of the Manitoba intraprovincial general freight carriers while they earn 69% of the revenue and 53% of the operating margin. They have the largest shares of reported assets and estimated tonnage carried, at 67% and 54% respectively. These figures should be treated with caution due to reporting problems. Of these carriers, 92% are profitable. This is a higher proportion of profitable firms than any other class. However, the average operating ratio of 0.960 for Class I and II carriers is the worst of all the classes. This illustrates the problem of using operating ratios to measure profitability.

The Class III carriers, firms with $100,000 to $499,999 annual revenue, represent 42% of intraprovincial general freight carriers. These carriers earn 25% of the revenue and 29% of the operating margin, own 24% of reported assets and carry 35% of the estimated tonnage carried. Although the operating margin of 0.938 is better than the Class I and II carriers, only 81% of firms in this class were profitable.

The Class IV carriers are all those carriers with annual revenues below $100,000. This class contains 45% of Manitoba carriers, but they earn only 6% of total revenue, own 9% of the assets and handle 11% of the total estimated tonnage carried. It is suspected that several small carriers which are owner-operated do not report wages as part of operating costs, which results in inflated operating margins. As a result, the small carriers earn 18% of the operating margin and appear to have an excellent operating ratio of 0.848. These figures should be treated with caution.

1.2.3.3 Provincial Control of Rates and Costs

The Motor Transport Board has the authority to specify the conditions of carriage, tariff of tolls and miscellaneous intraprovincial movement of freight by for-hire carriers. Carriers who do not wish to follow the prescribed rates or charges are required to file alternative rates with the Board for approval. There are separate rules and tariffs for Household Goods Movers. All of this information is published in the 1982-83 Manitoba Official Ship by Truck Directory, or available from the Motor Transport Board.

The formulae used by the Board to calculate rate schedules are not tied specifically to cost elements within the industry so as to produce rates that change in lock step with specific carrier costs. The Board adjusts the rate schedules to reflect general changes in overall operating costs. This discretionary approach permits the construction of rate schedules which recognize varying needs and competitive pressures faced by carriers operating at short, intermediate and long distances, handling both large and small shipments.

The general form of the rate formula is:

$$\text{Rate} = A \times \left( \frac{1}{B \times c} \right) + (d \times B^{-e})$$

Where
- A = distance in miles
- B = weight in pounds
- c = factor to establish the slope of the curve which represents the distance dependent variable for the line haul portion of the rate
- d = factor to set the intercept of the curve which represents the fixed overhead variable for the terminal portion of the rate
- e = factor to vary the distribution of the terminal portion between the weight intervals

A computer program has been written which is used to alter the existing rate schedules following Board decisions to allow rate increases. The computer program contains a data set of traffic composition information which allows the calculation of the overall weighted impact of rate increases which vary for different distance and weight blocks. If, for example, the Board decided to allow no increase for shipments under 100 miles while creating an overall increase of 10%, the different constants in the formula can be altered to produce rates which reflect this decision.

As mentioned, a separate tariff applies to household goods carriers. This tariff is also calculated on the basis of distance and weight, although the factors in the formula are somewhat different. The household goods rate formula has the same basic characteristics as the general freight formula. It can be adjusted to reflect varying changes in fixed and variable costs experienced by the industry from time to time.

The only trucking costs which are directly controlled by the Province are the costs of vehicle registration and insurance. The schedules of registration and insurance fees for 1982 are contained in the Vehicle Registration and Insurance Manual and the Manitoba Gazette.

Insurance fees are based on vehicle class, gross vehicle weight, the use of the vehicle, the model year of the vehicle, and the territory or region of the province in which the registered owner resides. Insurance rates will also differ depending on the level of insurance coverage desired by the owner. Registration fees are based on vehicle class and gross vehicle weight.

## 1.3 Structure of the Commercial Trucking Industry

### 1.3.1 Operating Authority

Commercial (or private) trucks include all trucks other than public service vehicles, farm trucks, and "other" (or T-plate) trucks. In order to operate a commercial truck, the operator must obtain a licence and registration from the registrar. The licence application must contain information relating to the nature of the proposed operations of the vehicle. An amendment to section 291, subsections 1 and 2 of the Highway Traffic Act is awaiting royal assent which will require commercial operators of trucks over 12,700 kg. to obtain an operating certificate or licence from the Motor Transport Board rather than from the registrar.

There are no restrictions concerning the geographic area of operation of commercial trucks. The only requirement is that an extraprovincial licence is obtained for travel outside of Manitoba.

The critical factor in defining a commercial operation is that no compensation can be received for the transport service. It is important to note that the ownership of the goods carried is not the central point. For example, the carriage of goods for others without fee is allowed under a commercial licence, although this is unlikely to occur. However, the delivery of a company's own goods to a prospective buyer cannot include a delivery charge, either explicitly or implicitly in the price charged for the goods, since

this is deemed to be compensation for the trucking service. In practice, this results in goods carried by commercial trucks to be priced equally whether delivered by the commercial carrier or picked up by the buyer.

There are no restrictions on the type of equipment used or commodities carried other than those related to maximum allowable weights and highway safety. These types of restrictions are applied to all vehicles and are not directed toward any particular licence classification.

### 1.3.2 Commercial Trucking Company Operations Information

Very little information is presently available concerning commercial trucking. Statistics Canada is in the process of compiling information based on survey forms sent to all owners of seven or more trucks based on provincial registration tapes. When this first phase is completed, provincial summaries will be available listing the number of private truck fleets, salaries and wages, fuel costs, maintenance and repair costs, gasoline and diesel fuel used, number of trucks and tractors operated, and number of drivers. Preliminary data for the Atlantic provinces indicate that private trucking may be as important as for-hire trucking.

The December 1982 Manitoba motor vehicle registration file was accessed to produce fleet information for commercial carriers licenced in Manitoba. This data provides an indication of the structure of the commercial industry, and is reproduced in Table 17.

Table 17

Manitoba Commercial Truck Fleets, over 4,000 kg , 1982[1]

| Number of Trucks in Fleet | Number of Fleets | Total Number of Trucks[2] |
|---|---|---|
| 1 | 1,607 | 1,607 |
| 2 | 450 | 900 |
| 3 | 130 | 390 |
| 4 | 75 | 300 |
| 5 | 34 | 170 |
| 6 | 22 | 132 |
| 7 | 18 | 126 |
| 8 | 13 | 104 |
| 9 | 7 | 63 |
| 10 | 6 | 60 |
| 11 | 10 | 110 |
| 12 | 4 | 48 |
| 13-15 | 9 | 122 |
| 16-20 | 5 | 90 |
| 21-25 | 5 | 113 |
| 26-30 | 2 | 53 |
| 31-35 | 2 | 67 |
| 36-40 | 1 | 39 |
| Over 40 | 4 | 240 |
| Total | 2,404 | 4,734 |

1. Source: Manitoba vehicle registration file, December 1982
2. Includes - Class C1 - commercial truck
   Class C2 - commercial trailer
   Class C3 - commercial drive-away, intra-Manitoba
   Class C4 - commercial drive-away, extraprovincial

Trucks with gross vehicle weights of 4,000 kilograms or less were excluded, since these trucks are not considered to be extensively used for the carriage of freight.

The majority (91%) of commercial and local truck owners own from one to three trucks. This indicates that most commercial operations in Manitoba are small in size. There are 7 commercial truck owners with more than 30 trucks, which shows that there are some large fleets. This number is comparable to the 10 owners of more than 30 trucks found for the for-hire operations. The average fleet size is calculated as 2.0 trucks, again pointing to the predominance of small fleets. This is considerably smaller than the average fleet size of 6.2 trucks found for the for-hire operations.

The distribution of gross vehicle weight for commercial trucks is illustrated in Table 18. A total of 65% of all commercial trucks are 4,000 kilograms or less. As mentioned previously, these are not considered to be extensively used for freight hauling. Removing these light trucks from consideration leaves 4,734 commercial trucks eligible for hauling freight, including 4,371 class C1 trucks. For comparison, this is more than twice the number of for-hire trucks over 4,000 kilograms.

Even after removing the lightest trucks from consideration, the remaining commercial trucks are concentrated in lighter weight categories, with 23.6% of commercial trucks between 4,001 and 14,000 kg. Only 5.8% are over 32,000 kg , compared to the 72% figure which was found for for-hire trucks. Actual numbers of

Table 18

Commercial Trucks by Gross Vehicle Weight, 1982[1]

| Gross Vehicle Weight Range (kilograms) | Number and Percentage of Commercial Vehicles by Class | | | | | |
|---|---|---|---|---|---|---|
| | Commercial Trucks (Class C1) | | Other Types[2] (Class C2, C3 and C4) | | All Classes | |
| | No. | % | No. | % | No. | % |
| Under 4,001 | 8,417 | 65.8 | 285 | 44.0 | 8,702 | 64.8 |
| 4,001-6,000 | 1,173 | 9.2 | 131 | 20.2 | 1,304 | 9.7 |
| 6,001-8,000 | 387 | 3.0 | 75 | 11.6 | 462 | 3.4 |
| 8,001-10,000 | 359 | 2.8 | 92 | 14.2 | 451 | 3.4 |
| 10,001-12,000 | 449 | 3.5 | 25 | 3.8 | 474 | 3.5 |
| 12,001-14,000 | 471 | 3.7 | 17 | 2.6 | 488 | 3.6 |
| 14,001-16,000 | 124 | 1.0 | 15 | 2.3 | 139 | 1.0 |
| 16,001-18,000 | 30 | 0.2 | 5 | 0.8 | 35 | 0.3 |
| 18,001-20,000 | 169 | 1.3 | 3 | 0.5 | 172 | 1.3 |
| 20,001-24,000 | 285 | 2.2 | 0 | 0.0 | 285 | 2.1 |
| 24,001-28,000 | 117 | 0.9 | 0 | 0.0 | 117 | 0.9 |
| 28,001-32,000 | 39 | 0.3 | 0 | 0.0 | 39 | 0.3 |
| 32,001-36,000 | 64 | 0.5 | 0 | 0.0 | 64 | 0.5 |
| 36,001-40,000 | 644 | 5.0 | 0 | 0.0 | 644 | 4.8 |
| 40,001-48,000 | 12 | 0.1 | 0 | 0.0 | 12 | 0.1 |
| Over 48,000 | 48 | 0.4 | 0 | 0.0 | 48 | 0.4 |
| Total[3] | 12,788 | 100.0 | 648 | 100.0 | 13,436 | 100.0 |

1. Source: Manitoba vehicle registration file, December 1982.
2. Includes - Class C2 - commercial trailer
   Class C3 - commercial drive-away, intra-Manitoba
   Class C4 - commercial drive-away, extraprovincial
3. Totals may not add properly due to rounding.

trucks are somewhat closer, with 768 commercial trucks and 1,525 for-hire trucks having gross vehicle weight exceeding 32,000 kg.

### 1.3.3 Commercial Carrier Financial Information

Little information is available concerning commercial carrier finances. The only information which is published is the cost of registration and insurance for commercial trucks. These costs are determined by gross vehicle weight, vehicle class, vehicle use, territory of registration and model year.

## 1.4 Structure of Farm Trucking

### 1.4.1 Operating Authority

A farm truck is defined as a truck owned or leased by a farmer, a person who in the opinion of the Registrar is engaged in farming operations to a significant degree. It can be used by a farmer or his employee for transporting products of the farm or products for use on the farm. As well, it can be used for hauling products for use on another farm or products of another farm, except for milk, eggs and livestock, without compensation. Compensation is allowed for the transportation of grain, oilseeds, sugarbeets, vegetables and fruits from the farm where the crop was grown to a grain elevator, processing plant or market.[4]

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4. Section 169.1 of the Manitoba Highway Traffic Act.

There are no restrictions on the area of operation of farm trucks, or on the type of trucks which can be licenced as farm trucks.

### 1.4.2 Farm Trucking Operations Information

Fleet information concerning farm trucks has been derived from motor vehicle registration files for December 1982, and is displayed in Table 19. A large number of small farm trucks, all those under 4,001 kg gross vehicle weight, have been excluded since they are assumed to be used for purposes other than freight carriage.

The vast majority of farm truck fleets are small, with 98.9% containing one to three trucks and 81.1% containing just one truck. The largest fleet contains only 21 trucks, and there are only four fleets with more than 10 trucks. The average fleet size is 1.25 trucks. This is considerably below that of all other types of trucks.

A distribution of farm trucks by gross vehicle weight is contained in Table 20. Of all farm trucks, 61.7% had a gross vehicle weight of less than 4001 kilograms. This group is primarily one-half and three-quarter ton pickup trucks. These trucks are not used extensively for hauling freight, but rather as passenger vehicles.

The groups with weights ranging from 4,001 to 14,000 kilograms are primarily single-axle trucks of one to five tons, although smaller

Table 19

Manitoba Farm Truck Fleets, over 4,000 kg , 1982[1]

| Number of Trucks in Fleet | Number of Fleets | Total Number of Trucks |
|---|---|---|
| 1 | 15,524 | 15,524 |
| 2 | 2,939 | 5,878 |
| 3 | 452 | 1,356 |
| 4 | 104 | 416 |
| 5 | 50 | 250 |
| 6 | 20 | 120 |
| 7 | 15 | 105 |
| 8 | 13 | 104 |
| 9 | 8 | 72 |
| 10 | 3 | 30 |
| 11 | 0 | 0 |
| 12 | 1 | 12 |
| 13-15 | 2 | 29 |
| 16-20 | 0 | 0 |
| 21-25 | 1 | 21 |
| 26-30 | 0 | 0 |
| 31-35 | 0 | 0 |
| 36-40 | 0 | 0 |
| Over 40 | 0 | 0 |
| Total | 19,132 | 23,917 |

1. Source: Manitoba vehicle registration file, December 1982.

Table 20

Farm Trucks by Gross Vehicle Weight, 1982[1]

| Gross Vehicle Weight Range (kilograms) | Number of Farm Trucks | Percentage of Farm Trucks | Assumed Truck Type[2] |
|---|---|---|---|
| Under 4,001 | 38,571 | 61.7 | 1/2 and 3/4 ton |
| 4,001-6,000 | 4,603 | 7.4 | 1 ton single-axle |
| 6,001-8,000 | 3,260 | 5.2 | 2 ton single-axle |
| 8,001-10,000 | 3,867 | 6.2 | 3 ton single-axle |
| 10,001-12,000 | 4,166 | 6.7 | 4 ton single-axle |
| 12,001-14,000 | 3,990 | 6.4 | 5 ton single-axle |
| 14,001-16,000 | 505 | 0.8 | 3 ton tandem-axle |
| 16,001-18,000 | 223 | 0.4 | 4 ton tandem-axle |
| 18,001-20,000 | 1,218 | 2.0 | 5 ton tandem-axle |
| 20,001-24,000 | 1,645 | 2.6 | 5 ton tandem-axle |
| 24,001-28,000 | 67 | 0.1 | 6 ton tandem-axle |
| 28,001-32,000 | 25 | 0.0 | tractor and trailer |
| 32,001-36,000 | 24 | 0.0 | tractor and trailer |
| 36,001-40,000 | 290 | 0.5 | tractor and trailer |
| 40,001-48,000 | 5 | 0.0 | tractor and trailer(s) |
| Over 48,000 | 29 | 0.0 | tractor and trailer(s) |
| Total | 62,488 | 100.0 | |

1. Source: Manitoba vehicle registration file, December 1982.
2. Assumed truck type from discussions with truck dealers and elevator agents. These are broad generalizations only and are to be treated with caution.

tandem trucks may also fall within this range. These trucks account for 31.9% of registered farm trucks.

The next weight groups from 14,001 to 28,000 kilograms are mainly tandem axle trucks of three to six ton size. This group represents 5.9% of registered farm trucks.

The final weight categories of 28,001 kilograms and larger account for only 0.5% of registered farm trucks. These trucks are tractor and trailer units. This type of truck is suited to very large farms or to long-haul operations. As can be seen, tractor and trailer units are a relatively insignificant proportion of the farm truck fleet in Manitoba.

### 1.4.3 Farm Trucking Financial Information

The only information readily available concerning farm trucking finances is the cost of registration and insurance. These can be found in the Manitoba Gazette and the Vehicle Registration and Insurance Manual.

Farm vehicles are exempt from provincial fuel tax. These vehicles are allowed to use untaxed "purple" gas and diesel which must be purchased in bulk.

## 1.5 "Other" or "T-plate" Trucking Structure

### 1.5.1 Operating Authority

Trucks which are allowed to be licenced with T or Y plates are defined by exception. The complete description of this truck class is contained in section 1.1. Basically, this class contains private passenger trucks under 3700 kilograms; public service vehicles operated within a community, such as delivery services; commercial trucks operated within a 30 kilometre radius of a designated community or within 20 kilometres of Winnipeg's perimeter; or any type of truck carrying specified exempt commodities.

The name "other" is somewhat ambiguous, yet this class of truck contains a mixture of truck types which are exceptions to the other classifications. These trucks are often called "T-plate" trucks which reflects on the first letter of the licence plates designated to them. Since plates for these trucks may have a T or Y as the first letter, this name is also less than adequate. In this report, reference to "other" trucking relates to those trucks meeting the definition as outlined above.

### 1.5.2 "Other" Trucking Operations Information

The December 1982 motor vehicle registration file was accessed to produce fleet information for "other" trucks licenced in Manitoba. Since a large number of trucks in this class are used as passenger vehicles, trucks with gross vehicle weights below 4,001 kilograms

have been excluded. The resulting information is contained in Table 21.

A full 92% of "other" trucks are contained in fleets of one to three trucks. Alone, this fact indicates that most fleets are small in size. However, there are 23 fleets of more than 30 trucks, as compared to 7 and 10 fleets of this size for commercial and for-hire carriers respectively. As well, there are 12 fleets of more than 40 "other" trucks containing 1,735 trucks for an average fleet size of 144.6 trucks. This indicates that there are some extremely large fleets of "other" trucks. Despite this, the overall average fleet size is only 2.2 trucks. This is comparable to the 2.0 found for commercial trucks.

Table 22 contains the distribution of gross vehicle weights of "other" trucks. A total of 88% of these trucks are under 4,001 kg. These small trucks are not considered to be freight carrying vehicles. There are 9,636 "other" trucks over 4,000 kg, more than twice the number of commercial vehicles of this size and four times more than the for-hire trucks of this size.

There are 1,248 "other" trucks with gross vehicle weight over 32,000, which represents 1.5% of all "other" trucks. Although this percentage is below that found for commercial and for-hire trucks, the actual number is greater than the 768 found for commercial trucks and just slightly less than the 1,525 for-hire trucks with gross vehicle weight exceeding 32,000 kg.

Table 21

Manitoba "Other" Truck Fleets, Over 4,000 kg , 1982[1]

| Number of Trucks in Fleet | Number of Fleets | Total Number of Trucks |
|---|---|---|
| 1 | 3,264 | 3,264 |
| 2 | 567 | 1,134 |
| 3 | 237 | 711 |
| 4 | 103 | 412 |
| 5 | 54 | 270 |
| 6 | 43 | 258 |
| 7 | 27 | 189 |
| 8 | 23 | 184 |
| 9 | 13 | 117 |
| 10 | 15 | 150 |
| 11 | 10 | 110 |
| 12 | 11 | 132 |
| 13-15 | 9 | 122 |
| 16-20 | 9 | 161 |
| 21-25 | 9 | 202 |
| 26-30 | 4 | 108 |
| 31-35 | 6 | 189 |
| 36-40 | 5 | 188 |
| Over 40 | 12 | 1,735 |
| Total | 4,421 | 9,636 |

1. Source: Manitoba vehicle registration file, December 1982

Table 22

"Other" Trucks by Gross Vehicle Weight, 1982[1]

| Gross Vehicle Weight range (kilograms) | Number of Other Trucks | Percentage of Other Trucks |
|---|---|---|
| Under 4,001 | 69,133 | 87.8 |
| 4,001-6,000 | 2,267 | 2.9 |
| 6,001-8,000 | 736 | 0.9 |
| 8,001-10,000 | 1,057 | 1.3 |
| 10,001-12,000 | 1,478 | 1.9 |
| 12,001-14,000 | 786 | 1.0 |
| 14,001-16,000 | 180 | 0.2 |
| 16,001-18,000 | 125 | 0.2 |
| 18,001-20,000 | 483 | 0.6 |
| 20,001-24,000 | 900 | 1.1 |
| 24,001-28,000 | 271 | 0.3 |
| 28,001-32,000 | 105 | 0.1 |
| 32,001-36,000 | 184 | 0.2 |
| 36,001-40,000 | 955 | 1.2 |
| 40,001-48,000 | 16 | 0.0 |
| Over 48,000 | 93 | 0.1 |
| Total | 78,769 | 100.0 |

1. Source: Manitoba vehicle registration file, December 1982

### 1.5.3 "Other" Trucking Financial Information

The only available financial information concerning "other" trucks is the registration and insurance fees applicable to this class. This class is referred to as "trucks other than farm trucks" for registration, and is described by different uses for insurance purposes.

## 2. Characteristics of Truck Flows

### 2.1 Truck Weight Survey Information

The Truck Weight Survey conducted by Manitoba Department of Highways and Transportation is a major ongoing survey which records characteristics of truck flows on Manitoba highways. Every year, 13 sample locations are surveyed for one week in each of the four seasons. Information recorded for each truck includes station, date and time, licence number, fuel type, origin and destination, truck configuration, commodity, vehicle dimensions and axle loads. These records have been aggregated to produce the statistics contained in the following sections of the report.

#### 2.1.1 Trip Length

Small samples were chosen from the Truck Weight Survey data to estimate trip length for all highways sampled and separately for the two Trans Canada Highway (TCH) border points. This information is summarized in Table 23A. For all roads sampled, over 75% of truck trips are under 400 kilometres. This contrasts with only 18% of trips under 400 kilometres for the TCH border points.

Table 23A

Distribution of Truck Trip Lengths, 1980 and 1981 [1]

(Number of trucks observed by distance of haul)

| Distance Block (km) | All Roads Sampled | | Trans-Canada Highway Border Points | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| 0 - 400 | 145 | 75.6 | 11 | 17.8 |
| 400 - 800 | 20 | 10.5 | 11 | 17.8 |
| 800 - 1200 | 5 | 2.6 | 2 | 3.2 |
| 1200 - 1600 | 6 | 3.1 | 10 | 16.1 |
| 1600 - 2000 | 2 | 1.0 | 1 | 1.6 |
| 2000 - 2400 | 1 | 0.5 | 11 | 17.7 |
| 2400 - 2800 | 1 | 0.5 | 2 | 3.2 |
| 2800 - 3200 | 0 | 0.0 | 2 | 3.2 |
| 3200 - 3600 | 7 | 3.7 | 6 | 9.7 |
| 3600 - 4000 | 2 | 1.0 | 1 | 1.6 |
| 4000 - 4400 | 0 | 0.0 | 0 | 0.0 |
| 4400 - 4800 | 2 | 1.0 | 5 | 8.1 |
| 4800 - 5200 | 1 | 0.5 | 0 | 0.0 |
| Total | 192 | 100.0 | 62 | 100.0 |

1. Source: Truck Weight Survey, 1980 and 1981

The under 400 km trips from all roads sampled are presented in further detail in Table 23B. It should be noted that of all truck trips, over 30% are less than 50 km. There is a definite pattern of increased trip-making as haul distance decreases.

The percentage and cumulative percentage distributions of trucks observed by distance of haul for the TCH points and for all sample locations are illustrated in the graphs following the tables.

### 2.1.2 Truck Weights

The trucks using the Manitoba highway system have a wide range of observed actual gross vehicle weights. The distribution of recorded weights for all trucks sampled in 1980 and 1981 for the Truck Weight Survey is contained in Table 24.

A total of 51.5% of all trucks weighed were less than 15,000 kilograms. For empty trucks, 88.6% were below this weight, while 33.6% of loaded trucks were below this limit. This indicates that the empty trucks are primarily in the lower weight groups, and a significant number of loaded trucks are also of low weight. For loaded trucks, there is an even distribution of trucks in each weight group from 3001-9000 kilograms up to 33,001-39,000 kilograms.

What is observed is representative of the number of trucks in each weight class weighted by their trip length. In other words, trucks with longer hauls are more likely to be recorded than those with short hauls. If larger trucks tend to travel longer distances,

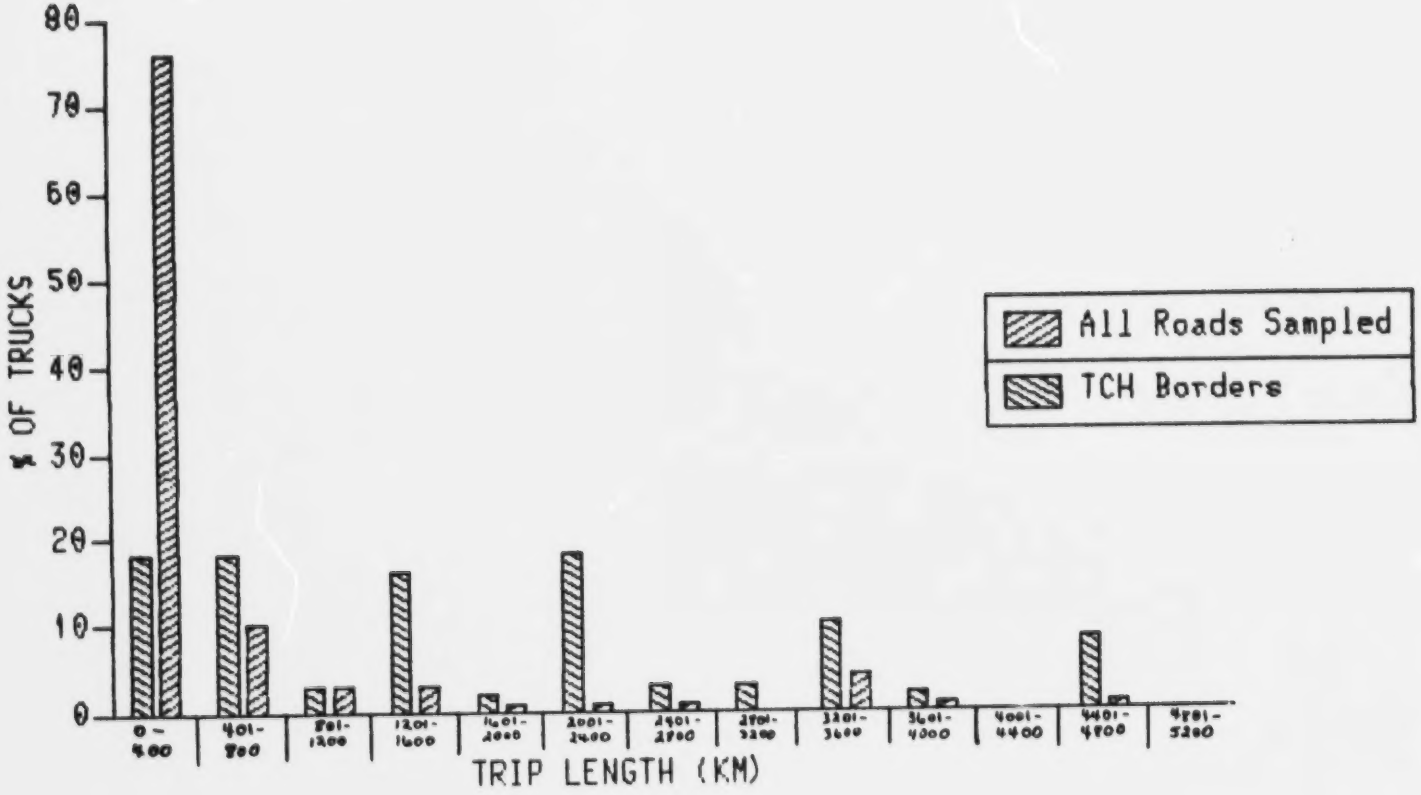
Table 23B

Distribution of Truck Trip Lengths under 400 km , 1980 and 1981 [1]
(Number of trucks observed by distance of haul)

| Distance Block (km) | All Roads Sampled | | Trans-Canada Highway Border Points | |
|---|---|---|---|---|
| | Number | Percent of Total | Number | Percent of Total |
| 0-50 | 59 | 30.7 | 1 | 1.6 |
| 51-100 | 28 | 14.6 | 1 | 1.6 |
| 101-150 | 21 | 11.0 | 0 | 0.0 |
| 151-200 | 15 | 7.8 | 1 | 1.6 |
| 201-250 | 7 | 3.7 | 2 | 3.2 |
| 251-300 | 6 | 3.1 | 0 | 0.0 |
| 301-350 | 6 | 3.1 | 5 | 8.1 |
| 351-400 | 3 | 1.6 | 1 | 1.6 |
| Sub Total | 145 | 75.6 | 11 | 17.8 |

1. Source: Truck Weight Survey, 1980 and 1981

PERCENTAGE DISTRIBUTION OF TRUCK TRIP LENGTHS



CUMULATIVE DISTRIBUTION OF TRUCK TRIP LENGTHS

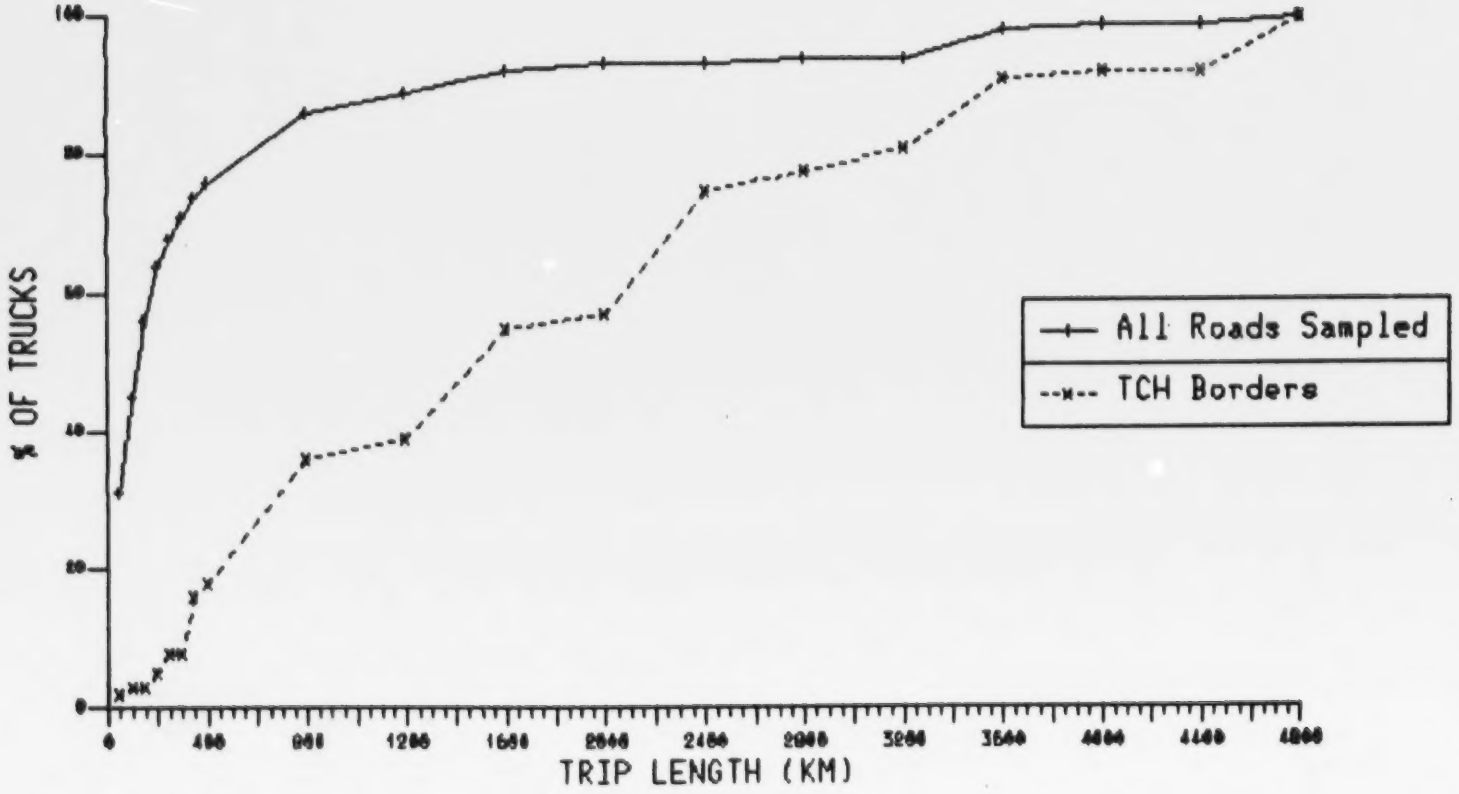


Table 24

Distribution of Recorded Gross Vehicle Weights, 1980 and 1981[1]

| Observed GVW Range (kilograms) | Loaded Trucks | | Empty Trucks | | Total | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| 0-3,000 | 25 | 0.2 | 150 | 3.2 | 175 | 1.2 |
| 3,001-9,000 | 1,825 | 18.6 | 1,984 | 41.9 | 3,809 | 26.2 |
| 9,001-15,000 | 1,450 | 14.8 | 2,057 | 43.5 | 3,507 | 24.1 |
| 15,001-21,000 | 1,356 | 13.8 | 499 | 10.5 | 1,855 | 12.7 |
| 21,001-27,000 | 1,042 | 10.6 | 28 | 0.6 | 1,070 | 7.4 |
| 27,001-33,000 | 1,794 | 18.3 | 13 | 0.3 | 1,807 | 12.4 |
| 33,001-39,000 | 2,010 | 20.5 | 2 | 0.0 | 2,012 | 13.8 |
| 39,001-45,000 | 133 | 1.4 | 1 | 0.0 | 134 | 0.9 |
| 45,001-51,000 | 155 | 1.6 | 0 | 0.0 | 155 | 1.1 |
| 51,001-57,000 | 25 | 0.2 | 0 | 0.0 | 25 | 0.2 |
| 57,001-63,000 | 1 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Total | 9,816 | 100.0 | 4,734 | 100.0 | 14,550 | 100.0 |

1. Source: Truck Weight Survey, 1980 and 1981

then the weight distribution shown here will be biased upward. However, this will properly reflect the use made of the highway system.

### 2.1.3 Truck Type

There are a large number of possible axle configurations for trucks, ranging from two-axle trucks up to multiple axle truck trains. From the Truck Weight Survey, the distribution of these truck types is illustrated in Table 25A.

To simplify the information, about 44% of the trucks sampled were straight trucks, with one-third of these having tandem axles. Approximately 52% of the trucks were tractor-trailer units with single trailers. Almost all of these were standard "18 wheeler" units. The majority of the remaining 4% of trucks surveyed were truck-trailer or tractor-double trailer combinations. This summary appears in Table 25B.

### 2.1.4 Licence Type

The distribution of trucks by licence class using the Manitoba highway network can be estimated from the Truck Weight Survey. Using the 1981 sample, the licence distribution is shown in Table 26.

The four major licence classes were encountered in approximately equal numbers on Manitoba highways. This is in contrast to the licence proportions listed previously in Table 1. Public service and commercial trucks form a much larger portion of the truck

## Table 25A

## Distribution of Trucks by Configuration, 1980 and 1981[1]

| Truck Configuration | Number of trucks | Percent |
|---|---|---|
| 8— | 4187 | 28.8 |
| 9— | 2175 | 14.9 |
| 10— | 92 | 0.6 |
| 11— | 254 | 1.8 |
| 12— | 0 | 0.0 |
| 13— | 11 | 0.1 |
| 14— | 7151 | 49.2 |
| 15— | 79 | 0.5 |
| 16— | 5 | 0.0 |
| 17— | 31 | 0.2 |
| 18— | 0 | 0.0 |
| 19— | 0 | 0.0 |
| 20— | 1 | 0.0 |
| 21— | 33 | 0.2 |
| 22— | 44 | 0.3 |
| 23— | 5 | 0.0 |
| 24— | 2 | 0.0 |
| 25— | 1 | 0.0 |
| 26— | 9 | 0.1 |
| 27— | 0 | 0.0 |
| 28— | 0 | 0.0 |
| 29— | 0 | 0.0 |
| 30— | 0 | 0.0 |

Table 25A cont'd

Distribution of Trucks by Configuration, 1980 and 1981

| Truck Configuration | Number of trucks | Percent |
|---|---|---|
| 31 — [illegible] | 0 | 0.0 |
| 32 — [illegible] | 109 | 0.8 |
| 33 — [illegible] | 101 | 0.7 |
| 34 — [illegible] | 154 | 1.1 |
| 35 — [illegible] | 36 | 0.2 |
| 36 — [illegible] | 0 | 0.0 |
| 37 — [illegible] | 0 | 0.0 |
| 38 — [illegible] | 0 | 0.0 |
| 39 — [illegible] | 0 | 0.0 |
| 40 — [illegible] | 0 | 0.0 |
| 41 — [illegible] | 35 | 0.2 |
| 42 — [illegible] | 0 | 0.0 |
| 43 — [illegible] [2] | 35 | 0.2 |
| TOTAL | 14550 | 100.0 |

1. Source: Truck Weight Survey, 1980 and 1981
2. This represents any axle configuration other than those already specified.

Table 25B

Summary of Trucks by Configuration, 1980 and 1981 [1]

| Truck Configuration | | Percent |
|---|---|---|
| Straight | Single | 28.8 |
| | Tandem | 15.0 |
| Tractors with single trailers | 18 wheelers | 49.2 |
| | other | 3.0 |
| Combination units | Truck-trailer | 0.7 |
| | Tractor-double trailer | 3.1 |
| Other Types | | 0.2 |
| Total | | 100.0 |

1. Source: Truck Weight Survey, 1980 and 1981

Table 26

Trucks Surveyed by Manitoba Licence Class, 1981 [1]

| Licence Class | Number | Percent |
|---|---|---|
| Public Service | 1765 | 28.3 |
| Commercial | 1739 | 27.9 |
| Farm | 1500 | 24.1 |
| "Other" | 1225 | 19.7 |
| Total | 6229 | 100.0 |

Table 27

Trucks Surveyed by Licence Location, 1981 [1]

| Location | Number | Percent |
|---|---|---|
| B.C. | 99 | 1.2 |
| Alberta | 351 | 4.2 |
| Saskatchewan | 397 | 4.8 |
| Manitoba | 6229 | 74.9 |
| Ontario | 566 | 6.8 |
| Quebec | 44 | 0.5 |
| Atlantic Canada | 7 | 0.1 |
| United States | 624 | 7.5 |
| Total | 8317 | 100.0 |

1. Source: Truck Weight Survey, 1981

weight sample than their proportions of licenced trucks. This probably reflects the fact that these trucks travel greater average distances and are more likely to be recorded in the Truck Weight Survey as a result. As well, the other classes contain many pick-ups and small vans which are not included in the truck weight survey.

Manitoba highways are also used extensively by trucks licenced in other provinces and the United States. Using the 1981 Truck Weight Survey, the number of trucks licenced by location is given in Table 27.

From the trucks surveyed, 75% were licenced in Manitoba. Ontario, with 7% of licences, was the next most frequent province of licence. Other Canadian provinces represented 11% of licences, with the U.S. contributing the remaining 7%.

### 2.1.5 Commodities Carried

The Truck Weight Survey divides the type of commodity carried into 35 groups. One of these is for empty trucks. The detailed commodity breakdown is contained in Table 28A. The most noticeable facts apparent from the table are that no single commodity accounts for more than 10% of all trucks sampled and empty trucks account for 32.5% of trucks surveyed.

In Table 28B, the commodities are grouped into Standard Commodity Classification (SCC) groups. The largest group, besides empty, is the food, feed, beverages and tobacco group.

Table 28A

Distribution of Trucks by Commodity, 1980 and 1981[1]

| Commodity | Number of Trucks | Percent | SCC Group Code |
|---|---|---|---|
| Animal By Products | 22 | 0.2 | 3 |
| Beverages | 339 | 2.3 | 2 |
| Building Materials-Gravel | 941 | 6.5 | 3 |
| Building Materials-Other | 1194 | 8.2 | 4 |
| Chemicals | 142 | 1.0 | 4 |
| Compressed Gases | 78 | 0.5 | 4 |
| Containers (Empty) | 134 | 0.9 | 6 |
| Earth, Organic Fertilizer | 316 | 2.2 | 3 |
| Empty (No Commodity) | 4734 | 32.5 | 8 |
| Equipment - Automotive | 40 | 0.3 | 5 |
| Equipment - Construction | 335 | 2.3 | 5 |
| Equipment - Farm | 395 | 2.7 | 5 |
| Equipment - Other | 264 | 1.8 | 5 |
| Food - For Animals | 281 | 1.9 | 2 |
| Food - For Humans | 888 | 6.1 | 2 |
| Farm Crop - Grain | 755 | 5.2 | 2 |
| Farm Crop - Other | 543 | 3.7 | 2 |
| Fuel - Heating, Light | 169 | 1.2 | 4 |
| Fuel - Vehicles, Engines | 570 | 3.9 | 4 |
| Household Goods, Appliances | 258 | 1.8 | 5 |
| Live - Poultry | 9 | 0.0 | 1 |
| Live - Stock | 491 | 3.4 | 1 |
| Live - Other | 10 | 0.1 | 1 |
| Medical Supplies & Equipment | 3 | 0.0 | 5 |
| Mining Products | 22 | 0.1 | 3 |
| Misc. Goods, Unknown Comm. | 926 | 6.4 | 7 |
| Paper Products | 67 | 0.5 | 4 |
| Petroleum Products | 28 | 0.2 | 4 |
| Plants | 11 | 0.1 | 3 |
| Service Vehicles | 141 | 1.0 | 5 |
| Scrap | 85 | 0.6 | 3 |
| Sporting Goods & Supplies | 7 | 0.0 | 5 |
| Timber | 253 | 1.7 | 3 |
| Vehicles, Campers, trailers | 51 | 0.4 | 5 |
| Wearing apparel | 48 | 0.3 | 5 |
| TOTAL | 14550 | 100.0 | |

1. Source: Truck Weight Survey, 1980 and 1981

## Table 28B

## Distribution of Trucks by SCC Commodity Group, 1980 and 1981[1]

| | SCC Group Code | SCC Commodity Group | Number of Trucks | Percent |
|---|---|---|---|---|
| Loaded: | 1 | Live Animals | 510 | 3.5 |
| | 2 | Food, Feed, Beverages and Tobacco | 2806 | 19.2 |
| | 3 | Crude Materials, Inedible | 1650 | 11.4 |
| | 4 | Fabricated Materials Inedible | 2248 | 15.5 |
| | 5 | End Products, Inedible | 1542 | 10.6 |
| | 6 | Special Types of Traffic | 134 | 0.9 |
| | 7 | Non-truckload Freight | 926 | 6.4 |
| Empty: | 8 | Empty, No Commodity | 4734 | 32.5 |
| | | TOTAL | 14,550 | 100.0 |

1. Source: Truck Weight Survey, 1980 and 1981

## 2.1.6 Load by Commodity

The Truck Weight Survey records axle weights, truck configuration and commodity for each truck sampled. The sum of axle weights provides the observed actual gross vehicle weight. The weight of the payload can be estimated by subtracting the average empty truck weight for the truck type in question from the actual gross vehicle weight. Average empty truck weights were derived from the sample data. The distribution of estimated load weights by commodity is contained in Table 29A and is summarized in Table 29B.

For all trucks, 28% of the loads were under 5000 kilograms. There is considerable variation by commodity. The commodities which appear least often in the lightest category include mining products (0.0%), timber (2.0%), building materials - gravel (2.9%), vehicles, campers , trailers (7.8%), and chemicals (12.0%). Conversely, commodities with the greatest proportion of loads under 5000 kg include sporting goods and supplies (85.7%), wearing apparel (83.3%) service vehicles (77.3%) and containers (empty) 70.9%.

Of all trucks sampled, 19% of loads were over 20,000 kg. Commodities with a significant proportion of these heavier loads include timber (69.1%), petroleum products (53.5%), chemicals (47.1%), and mining products (41.0%). Several commodities had no loads exceeding 20,000 kg, including live poultry, medical supplies and equipment, service vehicles, vehicles, campers, trailers, and sporting goods and supplies. There were only four loads recorded over 35,000 kg which represented less than 0.1% of all loads. Of these, two were construction equipment.

Table 29A

Distribution of Estimated Load by Commodity, 1980 and 1981[1]

| Commodity | Load (Kilograms)[2] 0-5,000 | 5,001-10,000 | 10,001-15,000 | 15,001-20,000 | 20,001-25,000 | 25,001-30,000 | 30,001-35,000 | 35,001-40,000 | Total |
|---|---|---|---|---|---|---|---|---|---|
| Live-Poultry | 5 (55.6) | 1 (11.1) | 2 (22.2) | 1 (11.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 9 (100.0) |
| Live-Stock | 286 (58.2) | 74 (15.1) | 29 (5.9) | 46 (9.4) | 55 (11.2) | 1 (0.2) | 0 (0.0) | 0 (0.0) | 491 (100.0) |
| Live-Other | 5 (50.0) | 3 (30.0) | 1 (10.0) | 0 (0.0) | 1 (10.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 10 (100.0) |
| Beverages | 128 (37.7) | 138 (40.7) | 39 (11.5) | 25 (7.4) | 7 (2.1) | 2 (0.6) | 0 (0.0) | 0 (0.0) | 339 (100.0) |
| Food-For Animals | 101 (35.9) | 63 (22.4) | 54 (19.2) | 37 (13.2) | 24 (8.6) | 2 (0.7) | 0 (0.0) | 0 (0.0) | 281 (100.0) |
| Food-For Humans | 467 (52.6) | 148 (16.7) | 59 (6.6) | 101 (11.4) | 110 (12.4) | 2 (0.2) | 1 (0.1) | 0 (0.0) | 888 (100.0) |
| Farm Crop-Grain | 212 (28.1) | 265 (35.1) | 92 (12.2) | 86 (11.4) | 96 (12.7) | 3 (0.4) | 1 (0.1) | 0 (0.0) | 755 (100.0) |
| Farm Crop-Other | 81 (14.9) | 105 (19.4) | 88 (16.2) | 114 (21.0) | 150 (27.6) | 5 (0.9) | 0 (0.0) | 0 (0.0) | 543 (100.0) |
| Animal Byproducts | 12 (54.6) | 5 (22.7) | 2 (9.1) | 1 (4.5) | 2 (9.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 22 (100.0) |
| Building Materials - Gravel | 27 (2.9) | 118 (12.5) | 255 (27.1) | 330 (35.1) | 203 (21.6) | 8 (0.8) | 0 (0.0) | 0 (0.0) | 941 (100.0) |
| Earth, Organic Fertilizer | 44 (13.9) | 27 (8.5) | 36 (11.4) | 106 (33.5) | 97 (30.7) | 3 (1.0) | 3 (1.0) | 0 (0.0) | 316 (100.0) |
| Mining Products | 0 (0.0) | 3 (13.6) | 0 (0.0) | 10 (45.4) | 7 (31.8) | 1 (4.6) | 1 (4.6) | 0 (0.0) | 22 (100.0) |
| Timber | 5 (2.0) | 8 (3.2) | 19 (7.5) | 46 (18.2) | 142 (56.1) | 32 (12.6) | 1 (0.4) | 0 (0.0) | 253 (100.0) |

Table 29A cont'd

Load (Kilograms)[2]

| Commodity | 0-5,000 | 5,001-10,000 | 10,001-15,000 | 15,001-20,000 | 20,001-25,000 | 25,001-30,000 | 30,001-35,000 | 35,001-40,000 | Total |
|---|---|---|---|---|---|---|---|---|---|
| Plants | 4 (36.3) | 3 (27.3) | 3 (27.3) | 0 (0.0) | 1 (9.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 11 (100.0) |
| Scrap | 35 (41.2) | 23 (27.0) | 1 (1.2) | 14 (16.5) | 11 (12.9) | 1 (1.2) | 0 (0.0) | 0 (0.0) | 85 (100.0) |
| Building Materials -Other | 204 (17.1) | 164 (13.7) | 178 (14.9) | 355 (29.7) | 252 (21.1) | 24 ( 2.0) | 16 (1.4) | 1 (0.1) | 1194 (100.0) |
| Chemicals | 17 (12.0) | 4 (2.8) | 13 (9.2) | 41 (28.9) | 56 (39.4) | 2 (1.4) | 9 (6.3) | 0 (0.0) | 142 (100.0) |
| Compressed Gases | 12 (15.4) | 26 (33.3) | 8 (10.3) | 10 (12.8) | 22 (28.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 78 (100.0) |
| Fuel-Heating, Light | 39 (23.1) | 40 (23.7) | 6 (3.5) | 29 (17.2) | 41 (24.2) | 10 (5.9) | 4 (2.4) | 0 (0.0) | 169 (100.0) |
| Fuel-Vehicles, Engines | 161 (28.2) | 160 (28.1) | 24 (4.2) | 55 (9.6) | 95 (16.7) | 37 (6.5) | 37 (6.5) | 1 (0.2) | 570 (100.0) |
| Paper Products | 17 (25.4) | 3 (4.5) | 5 (7.4) | 25 (37.3) | 16 (23.9) | 1 (1.5) | 0 (0.0) | 0 (0.0) | 67 (100.0) |
| Petroleum Products | 4 (14.3) | 3 (10.7) | 1 (3.6) | 5 (17.9) | 13 (46.4) | 0 (0.0) | 2 (7.1) | 0 (0.0) | 28 (100.0) |
| Equipment -Automotive | 19 (47.5) | 7 (17.5) | 7 (17.5) | 5 (12.5) | 2 (5.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 40 (100.0) |
| Equipment -Construction | 65 (19.4) | 58 (17.3) | 78 (23.3) | 81 (24.2) | 20 (6.0) | 19 (5.6) | 12 (3.6) | 2 (0.6) | 335 (100.0) |
| Equipment -Farm | 80 (20.2) | 132 (33.4) | 86 (21.8) | 90 (22.8) | 7 (1.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 395 (100.0) |
| Equipment -Other | 85 (32.2) | 72 (27.3) | 54 (20.5) | 32 (12.1) | 17 (6.4) | 4 (1.5) | 0 (0.0) | 0 (0.0) | 264 (100.0) |

Table 29A cont'd

Load (Kilograms)[2]

| Commodity | 0-5,000 | 5,001-10,000 | 10,001-15,000 | 15,001-20,000 | 20,001-25,000 | 25,001-30,000 | 30,001-35,000 | 35,001-40,000 | Total |
|---|---|---|---|---|---|---|---|---|---|
| Household Goods -Appliances | 83 (32.2) | 85 (32.9) | 73 (28.3) | 15 (5.8) | 2 (0.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 258 (100.0) |
| Medical Supplies and Equipment | 1 (33.3) | 0 (0.0) | 1 (33.3) | 1 (33.4) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (100.0) |
| Service Vehicles | 109 (77.3) | 28 (19.9) | 3 (2.1) | 1 (0.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 141 (100.0) |
| Sporting Goods and Supplies | 6 (85.7) | 1 (14.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 7 (100.0) |
| Vehicles, Campers, Trailers | 4 (7.8) | 14 (27.5) | 19 (37.2) | 14 (27.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 51 (100.0) |
| Wearing Apparel | 40 (83.3) | 5 (10.4) | 1 (2.1) | 1 (2.1) | 1 (2.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 48 (100.0) |
| Containers (Empty) | 95 (70.9) | 26 (19.4) | 7 (5.2) | 4 (3.0) | 2 (1.5) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 134 (100.0) |
| Misc. Goods, Unknown Comm. | 246 (26.6) | 132 (14.2) | 170 (18.4) | 238 (25.7) | 116 (12.5) | 16 (1.7) | 8 (0.9) | 0 (0.0) | 926 (100.0) |
| TOTAL | 2699 (27.5) | 1944 (19.8) | 1414 (14.4) | 1919 (19.5) | 1568 (16.0) | 173 (1.8) | 95 (1.0) | 4 (0.0) | 9816 (100.0) |

1. Source: Truck Weight Survey, 1980 and 1981
2. Table entries are number of trucks in each load by commodity cell with row percentages in brackets.

Table 29B

Summarized Distribution of Estimated Load by Commodity, 1980 and 1981[1]

| SCC Commodity Group | Load (Kilograms)[2] 0-10,000 | 10,001-20,000 | 20,001-30,000 | 30,001-40,000 | Total |
|---|---|---|---|---|---|
| Live Animals | 374 (73.3) | 79 (15.5) | 57 (11.2) | 0 (0.0) | 510 (100.0) |
| Food, Feed, Beverages and Tobacco | 1708 (60.9) | 695 (24.7) | 401 (14.3) | 2 (0.1) | 2806 (100.0) |
| Crude Materials, Inedible | 314 (19.0) | 823 (49.9) | 508 (30.8) | 5 (0.3) | 1650 (100.0) |
| Fabricated Materials, Inedible | 854 (38.0) | 755 (33.6) | 569 (25.3) | 70 (3.1) | 2248 (100.0) |
| End Products, Inedible | 894 (58.0) | 562 (36.4) | 72 (4.7) | 14 (0.9) | 1542 (100.0) |
| Special Types of Traffic | 121 (90.3) | 11 (8.2) | 2 (1.5) | 0 (0.0) | 134 (100.0) |
| Non-truckload Freight | 378 (40.8) | 408 (44.1) | 132 (14.2) | 8 (0.9) | 926 (100.0) |
| TOTAL | 4643 (47.3) | 3333 (34.0) | 1741 (17.7) | 99 (1.0) | 9816 (100.0) |

1. Source: Truck Weight Survey, 1980 and 1981
2. Table entries are number of trucks in each load by commodity cell with row percentages in brackets.

The information contained in Table 29A is summarized in Table 29B. Some of the extreme load ranges of individual commodities are suppressed when commodities are grouped. However, it is apparent that live animals, special types of traffic and inedible end products represent relatively light loads. Conversely, inedible crude materials, and inedible fabricated materials, represent heavier loads.

## 2.1.7 Truck O/D Flows

Two samples were taken to measure the incidence of extraprovincial versus intraprovincial trips. One sample was chosen from the entire Truck Weight Survey data base, with the results summarized in Table 30. The other sample was chosen from data collected on the Trans Canada Highway at the eastern and western boundaries. This sample is summarized in Table 31. Both samples are graphically displayed on the accompanying histogram.

For all roads, about 70% of truck trips sampled were intraprovincial trips. A further 12% of trips originated in Manitoba and were destined for points outside Manitoba, with another 10% originating outside of Manitoba with a destination in Manitoba. The final 8% of truck trips were passing through Manitoba. Here, points outside Manitoba include points in other Canadian provinces as well as U.S. points. The sample chosen was too small to accurately measure these separately.

Table 30

O/D Flows on All Roads Sampled, 1980 and 1981[1]

| Origin | Destination: Manitoba | Destination: Other | Origin Total |
|---|---|---|---|
| Manitoba | 69.8% | 12.5% | 82.3% |
| Other | 9.9% | 7.8% | 17.7% |
| Destination Total | 79.7% | 20.3% | 100.0% |

1. Source: Truck Weight Survey, 1980 and 1981

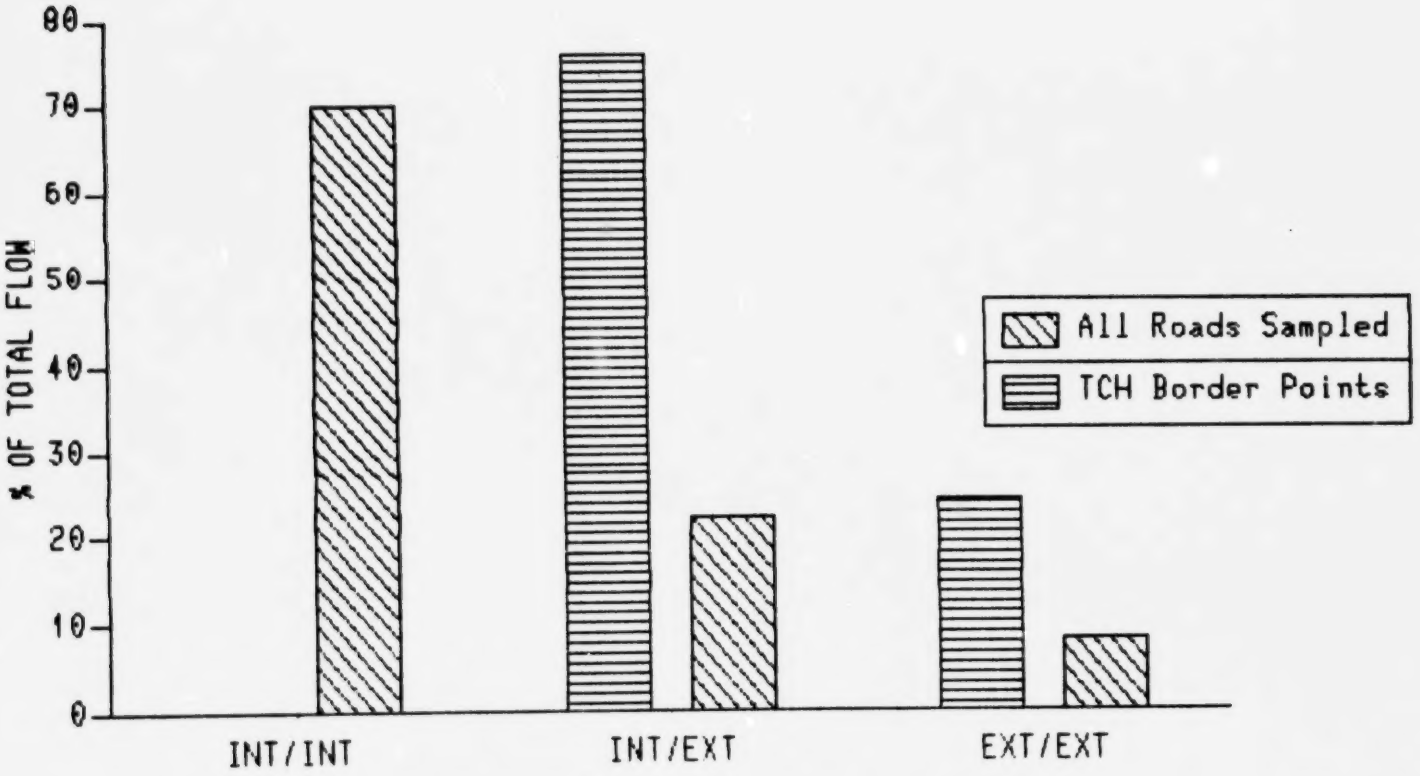
Table 31

O/D Flows on TCH (East and West Borders), 1981 [1]

| Origin | Destination: Manitoba | Destination: Other | Origin Total |
|---|---|---|---|
| Manitoba | 0.0% | 38.1% | 38.1% |
| Other | 38.1% | 23.8% | 61.9% |
| Destination Total | 38.1% | 61.9% | 100.0% |

1. Source: Truck Weight Survey, 1981

TRUCK O/D FLOWS IN MANITOBA



The Trans Canada Highway (TCH) border counts exclude intraprovincial trips. Trips into Manitoba from outside and to other locations from Manitoba each represented 38% of traffic sampled. Traffic passing through Manitoba accounted for 24% of TCH traffic.

If intraprovincial trips were excluded from the sample of all roads, then 40% of trips originated in Manitoba and were destined for points outside Manitoba, 33% originated outside Manitoba and had Manitoba destinations, and 27% of trips were passing through Manitoba. These results are then similar to those obtained for the TCH border points.

## 2.2 Western Canada Truck Origin/Destination Survey, 1978

Although the Truck Weight Survey includes the time of the survey, it cannot provide a trip time distribution since no sampling occurs at night. For this reason, the Western Canada Truck O/D Survey data is utilized here for trip times. It must be noted that this survey is not directly comparable to the Truck Weight Survey.

The Western Canada Truck O/D Survey was conducted at Headingley and West Hawk Lake in mid-May, 1978, for a complete week. These data provide a time distribution of truck trips by day of week and hour of day.

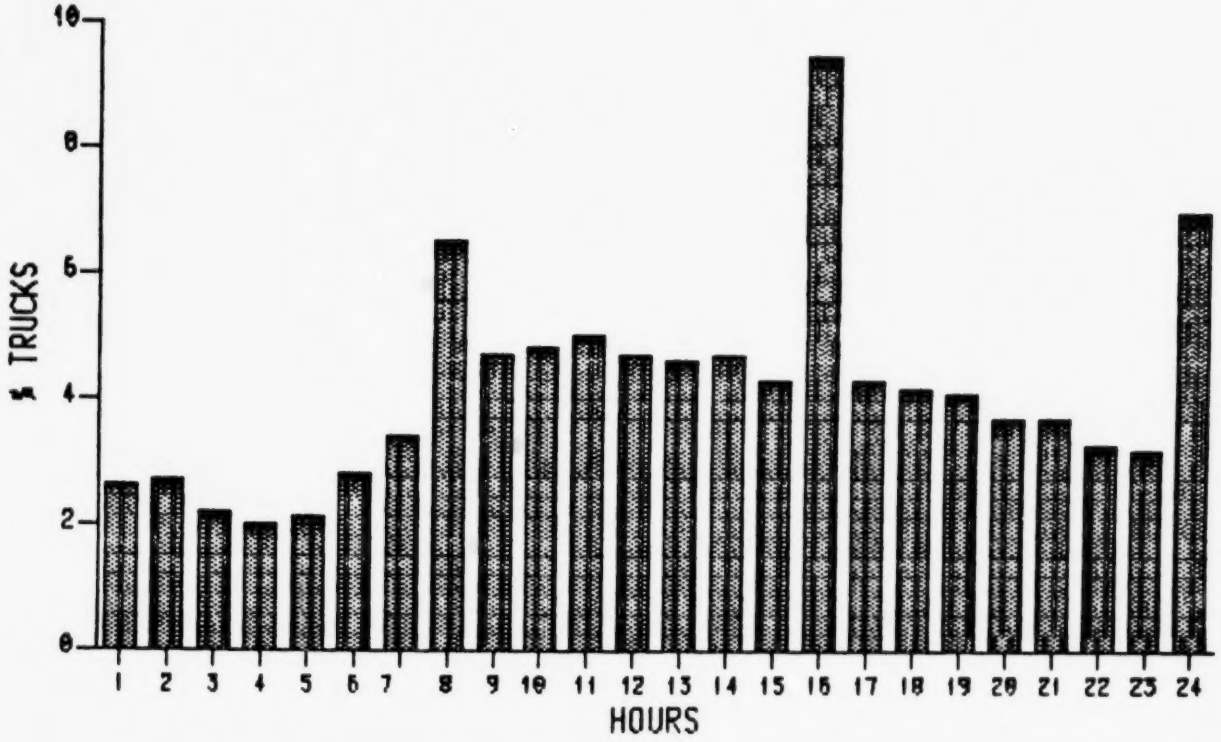
Table 32 shows the distribution of truck trips by day of week. Traffic is heaviest on Wednesday and Thursday, with the low being

Table 32

Truck Trips by Day of Week, May 13-19, 1978[1]

| Day | Truck Trips | Percent of Truck Trips |
|---|---|---|
| Saturday | 907 | 9.9 |
| Sunday | 632 | 6.9 |
| Monday | 1405 | 15.3 |
| Tuesday | 1418 | 15.5 |
| Wednesday | 1633 | 17.8 |
| Thursday | 1647 | 18.0 |
| Friday | 1528 | 16.6 |
| TOTAL | 9170 | 100.0% |

1. Source: Western Canada Truck O/D Survey, 1978




% OF TRUCKS BY HOUR
(Source: Western Canada Truck O/D Survey, 1978)

on Sunday. Thursday traffic is more than two and one-half times greater than that on Sunday.

The hourly distribution of truck trips is displayed in the following histogram. There is a peak at 4:00 p.m. (16:00) with smaller peaks at midnight and 8:00 a.m. Traffic exhibits a relatively constant flow level over the remaining parts of the day.

## 2.3 Statistics Canada For-Hire Trucking Survey

### 2.3.1 For Hire Truck O/D Flows

The Statistics Canada For-Hire Trucking Survey is an ongoing survey of for-hire carriers based on samples of shipment records or waybills. From this survey, information is developed on interprovincial truck freight flows by for-hire carriers. Excluded from the survey are carriers with annual revenue below $100,000, movements of less than 24 kilometres, and international traffic. The volume of traffic excluded is difficult to estimate, although 20 percent is a conservative rough guess.

Table 33 provides a summary of 1980 for-hire truck traffic to, from and within Manitoba by commodity group. About 58% of Manitoba-related traffic is entirely within Manitoba, 18% to/from Eastern Canada and 24% to/from Western Canada. The commodity group "fabricated materials, inedible" is the most important for intra-Manitoba traffic, accounting for 51% of the total of all commodities. A

Table 33

Manitoba Truck Traffic, 1980[1]

(Thousands of Tonnes)

| | Live Animals | | Food, Feed, Beverages and Tobacco | | Crude Materials, Inedible | | Fabricated Materials, Inedible | | End Products, Inedible | | General or Unclassified Freight | | GRAND TOTAL Manitoba Truck Traffic | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In From | Out To | In From | Out To | In From | Out to | In From | Out To | In From | Out To | In From | Out to | In From | Out To |
| Western[2] Canada | 27 | 4 | 151 | 204 | 81 | 15 | 259 | 297 | 64 | 222 | 12 | 37 | 594 | 779 |
| Manitoba[3] | 62 | 62 | 349 | 349 | 1,074 | 1,074 | 1,697 | 1,697 | 131 | 131 | 25 | 25 | 3,338 | 3,338 |
| Eastern[4] Canada | 4 | 7 | 108 | 189 | 8 | 43 | 197 | 256 | 107 | 90 | 27 | 4 | 452 | 589 |
| TOTAL FLOW[5] | 104 | | 1,001 | | 1,222 | | 2,706 | | 614 | | 105 | | 5,752 | |

1. Derived from Statistics Canada 53-224 For-Hire Trucking Survey, 1980. Figures include movements over 15 miles by for-hire carriers with annual revenues exceeding $100,000. International movements are excluded. Estimates are subject to varying degrees of error. Numbers may not add properly due to rounding.
2. Western Canada includes B.C., Alberta, Saskatchewan, Yukon and N.W.T.
3. Movements within Manitoba.
4. Eastern Canada includes Ontario, Quebec, New Brunswick, Nova Scotia, P.E.I. and Newfoundland.
5. Total Flow = In From Western Canada + Out to Western Canada + Intra-Manitoba + In From Eastern Canada and Out to Eastern Canada.

similar pattern holds for interprovincial traffic, for which the commodity group "fabricated materials, inedible" is the largest group for both east and west flows.

Overall Manitoba-related interprovincial for-hire truck traffic is unbalanced to/from both Eastern and Western Canada. Manitoba transports more crude materials, food products and fabricated materials to Eastern Canada than it receives, while receiving more end products and general freight than it ships. For Manitoba traffic from/to Western Canada, Manitoba ships more food products, fabricated materials, end products and general freight to Western Canada than it receives, while receiving more live animals and crude materials than it ships. Overall, these figures show that Manitoba is a net truck freight exporter to both Eastern and Western Canada. It must be noted here that the figures presented are estimates based on small samples and may be subject to considerable error.

In addition to Manitoba traffic, a considerable volume of goods crosses Manitoba which does not have a Manitoba origin or destination. This traffic is summarized in Table 34 and the accompanying flow map, and represents 17.8% of total for-hire traffic in Manitoba.

There is an imbalance in overhead traffic favouring westbound flows, with 73% of the total crossing traffic destined to Western Canada and 27% destined to Eastern Canada. The main commodity groups creating this imbalance are "end products, inedible" and

Table 34

FOR-HIRE TRUCK TRAFFIC CROSSING MANITOBA, 1980[1]

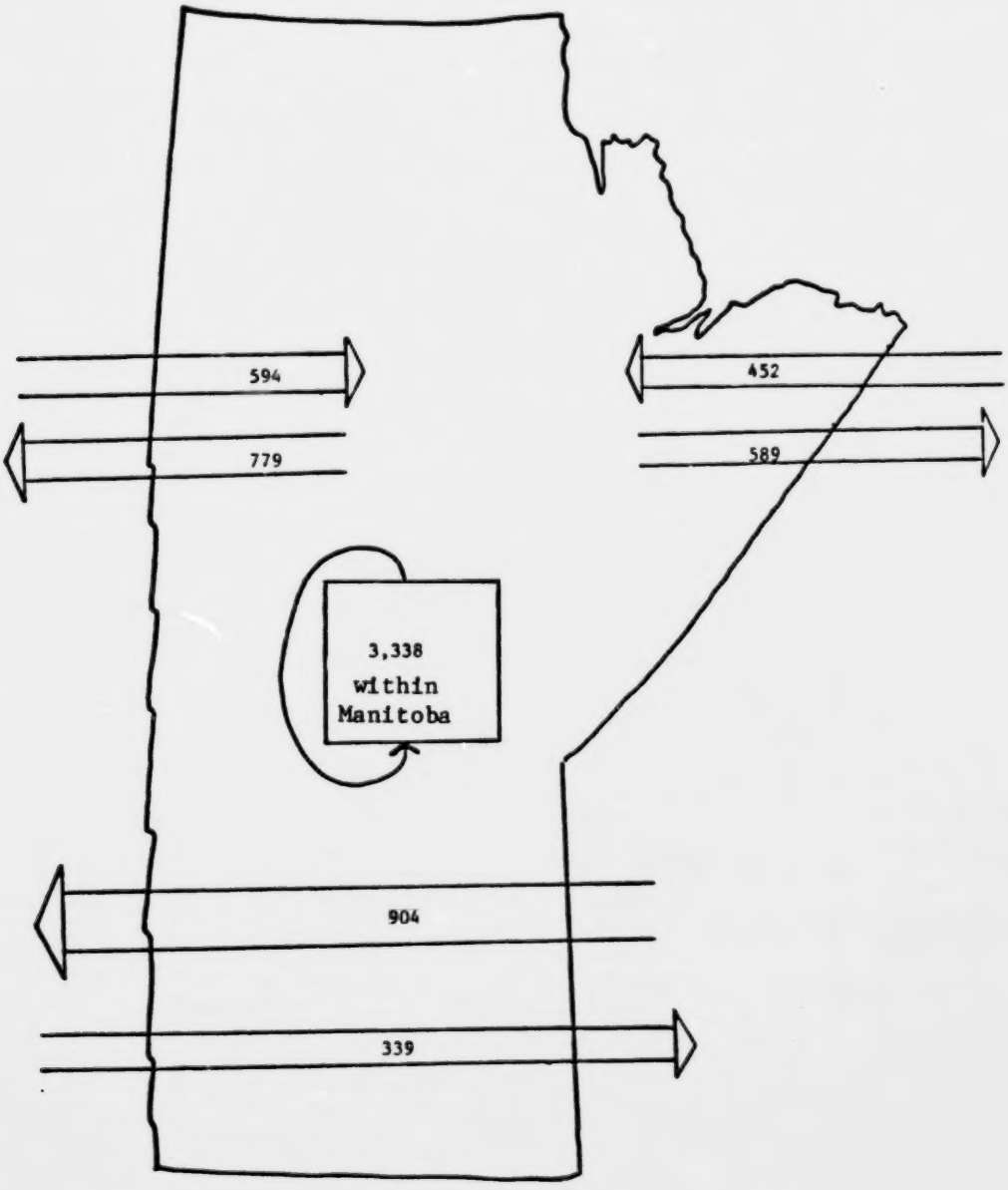
(Thousands of Tonnes)

| Direction | Live Animals | Food, Feed, Beverages and Tobacco | Crude Materials, Inedible | Fabricated Materials, Inedible | End Products, Inedible | General or Un-Classified Freight | GRAND TOTAL |
|---|---|---|---|---|---|---|---|
| Westbound[2] | 9 | 133 | 18 | 336 | 383 | 29 | 904 |
| Eastbound[3] | 35 | 94 | 13 | 87 | 102 | 8 | 339 |
| TOTAL | 40 | 227 | 31 | 423 | 485 | 37 | 1,243 |

1. Derived from Statistics Canada 53-224, For-Hire Trucking Survey, 1980. Figures include movements over 15 miles by for-hire carriers with annual revenues exceeding $100,000. International movements are excluded. Estimates are subject to varying degrees of error. Numbers may not add properly due to rounding.
2. Westbound traffic includes traffic originating in eastern provinces destined to provinces and territories west of Manitoba.
3. Eastbound traffic includes traffic originating in western provinces and the territories destined to provinces east of Manitoba.

For-Hire Truck Freight Flow, 1980

('000's tonnes)




1. Source: Statistics Canada 53-224 For-Hire Trucking Survey, 1980

"fabricated materials, inedible". This imbalance may imply that more empty trucks are crossing Manitoba eastbound than crossing Manitoba westbound.

All for-hire traffic is summarized in Table 35. As mentioned, 17.8% of this traffic is crossing Manitoba. Only 47.7% of all traffic is strictly intraprovincial. The remaining 34.5% of traffic is Manitoba to/from other provinces, with Western Canada traffic representing a slightly greater proportion than Eastern Canada traffic.

### 2.3.2 For-Hire Trucking Flow Characteristics

The Statistics Canada For-Hire Trucking Survey provides information on revenue earned and tonne-kilometres generated as well as the O/D flows discussed in section 2.3.1. Tables 36A and B contain details of these measures separately for traffic to Manitoba and from Manitoba for 1980.

For-hire truck traffic originating in Manitoba and destined to other provinces generated an estimated $101,352,000 in revenue for carriers in 1980, with another $80,407,000 generated by traffic destined to Manitoba from other provinces. Intra-Manitoba traffic generated $45,514,000 in revenue, which represented only 20% of the total estimated revenue of $227,273,000.

The estimated average revenue per tonne carried in 1980 was $31.22 for goods originating in Manitoba and $28.72 for goods destined to Manitoba. This compares to the estimated average revenue per tonne

Table 35

For-Hire Truck Freight Flow, 1980[1]

| | Estimated Volume (thousands of tonnes) | Percent of Volume |
|---|---|---|
| Intra-Manitoba | 3338 | 47.7 |
| Manitoba to/from Western Canada | 1373 | 19.6 |
| Manitoba to/from Eastern Canada | 1041 | 14.9 |
| Through Traffic | 1243 | 17.8 |
| Total | 6995 | 100.0 |

1. Source: Statistics Canada 53-244, For-Hire Trucking Survey, 1980

Table 36A

Estimated Transport Revenues Earned, Tonnage Carried, Tonne-kilometres Generated, etc., on the Movement of Goods from Manitoba to Province or Territory of Destination, 1980 [1]

| Destination | N.W.T.[2] | Yukon[2] | B.C | Alta. | Sask. | Man. | Ont. | Que. | N.B.[2] | N.S.[2] | P.E.I. | Nfld.[2] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revenues (000's $) | 890 | 28 | 12,152 | 27,224 | 21,301 | 45,514 | 27,583 | 10,035 | 402 | 1147 | - | 591 | 146,866 |
| Tonnes (000's) | 2.58 | .54 | 101.06 | 317.37 | 360.50 | 3337.17 | 435.48 | 143.43 | 1.17 | 8.75 | - | 1.61 | 4704.70 |
| Tonne-kilometres (000's) | 5713 | 149 | 239,075 | 425,552 | 231,093 | 644,521 | 621,968 | 322,522 | 2190 | 28,285 | - | 4,879 | 2,525,947 |
| Revenue ($)/Tonne | 344.96 | 51.85 | 120.25 | 85.78 | 59.09 | 13.64 | 63.34 | 69.96 | 343.59 | 131.09 | - | 367.08 | 31.22 |
| Revenue ($)/Tonne-km | .16 | .19 | .05 | .06 | .09 | .07 | .04 | .03 | .18 | .04 | - | .12 | .06 |
| Tonne-kilometres=Avg. km Tonnes | 2214 | 276 | 2366 | 1341 | 641 | 193 | 1428 | 2249 | 1872 | 3233 | - | 3030 | 537 |

1. Source: Statistics Canada 53-224, For-Hire Trucking Survey, 1980
2. These columns should be treated with caution due to small sample size.

Table 36B

Estimated Transport Revenues Earned, Tonnage Carried, Tonne-kilometres Generated, etc., on the Movement of Goods from Manitoba to Province or Territory of Destination, 1980 [1]

| Destination | N.W.T.[2] | Yukon[2] | B.C | Alta. | Sask. | Man. | Ont. | Que. | N.B.[2] | N.S.[2] | P.E.I. | Nfld.[2] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revenues (000's $) | 65 | 8 | 7,172 | 10,813 | 8,773 | 45,514 | 39,760 | 13,010 | 115 | 624 | - | 68 | 125,921 |
| Tonnes (000's) | .59 | .50 | 67.35 | 226.60 | 302.68 | 3337.17 | 342.98 | 109.29 | .62 | 1.10 | - | .85 | 4384.78 |
| Tonne-kilometres (000's) | 228 | 23 | 153,578 | 285,457 | 176,884 | 644,521 | 647,579 | 255,266 | 405 | 2,219 | - | 1551 | 2,167,712 |
| Revenue ($)/Tonne | 110.17 | 16.0 | 106.49 | 47.72 | 26.98 | 13.64 | 115.93 | 119.04 | 185.48 | 567.27 | - | 80.0 | 28.72 |
| Revenue ($)/Tonne-km | .29 | 0.35 | 0.05 | .04 | .05 | .07 | .06 | .05 | .28 | .28 | - | .04 | .06 |
| Tonne-kilometres=Avg. km Tonnes | 386 | 46 | 2280 | 1260 | 584 | 193 | 1888 | 2336 | 653 | 2017 | - | 1825 | 494 |

1. Source: Statistics Canada 53-224 For-Hire Trucking survey, 1980
2. These columns should be treated with caution due to small sample size.

of $13.64 for intra-Manitoba traffic. Since rates are based on weight and distance, this reflects the shorter hauls within Manitoba.

A different picture emerges from the calculation of revenue per tonne-kilometre. The 1980 estimated average revenue per tonne-kilometre was $0.06 for both goods originating from and destined to Manitoba. The same measure for intra-Manitoba traffic was $0.07 per tonne-kilometre. To summarize, although intra-Manitoba traffic generates less revenue per tonne than interprovincial traffic, it generates greater revenue per tonne-kilometre.

The estimated average trip length in 1980 of for-hire carriers was 537 km for Manitoba origin trips and 494 km for Manitoba destined trips. Intra-Manitoba trips averaged 193 km.

A rough measure of highway usage can be developed by estimating the tonne-kilometres generated in Manitoba by different traffic types. By assuming that the majority of interprovincial traffic crosses Manitoba on the Trans Canada Highway, and that Winnipeg is the usual origin/destination for interprovincial traffic with Manitoba as an origin or destination, Table 37 can be constructed. The Winnipeg assumption allows the average trip distance in Manitoba to be the Winnipeg to Manitoba border distances. The assumption that all interprovincial traffic uses the Trans Canada Highway will reduce the impact of extraprovincial traffic below actual, since other potential routes have greater Manitoba distances.

It can be seen that while 17.8% of the 1980 waybills sampled represented through traffic (Table 35), this traffic probably generated 32.8%

Table 37

Highway Usage by For-Hire Truck Traffic O/D, 1980

| Traffic Type | Volume[1] (000's tonnes) | Average Trip[2] Distance in Man. (km) | Highway Usage[3] (000's tonne-km) | Percent of Usage |
|---|---|---|---|---|
| Through Manitoba | 1,243 | 502 | 623,986 | 32.8 |
| Manitoba to/from Eastern Canada | 1,041 | 156 | 162,396 | 8.5 |
| Manitoba to/from Western Canada | 1,373 | 346 | 475,058 | 24.9 |
| Within Manitoba | 3,338 | 193 | 644,234 | 33.8 |
| Total | 6,995 | | 1,905,674 | 100.0 |

1. Source: Statistics Canada 53-224, For-Hire Survey, 1980.
2. Assumes Winnipeg as the origin/destination of extraprovincial Manitoba traffic.
3. Highway Usage = Volume x Average Trip Distance in Manitoba.

of the total tonne-km of for-hire trucking use of Manitoba highways. The bulk of this traffic probably uses the Trans-Canada and Yellowhead highways. Only 33.8% of the tonne-km of for-hire highway usage is represented by intraprovincial traffic. As opposed to the extraprovincial traffic, intraprovincial traffic is distributed over a large number of provincial highways. This means that the bulk of the tonne-kilometres of usage of the Trans Canada and Yellowhead highways by for-hire trucking is for extraprovincial traffic.

## IV Passenger Carrier Industry

### 1. Passenger Industry Structure

The two passenger modes for intercity travel which are directly regulated through the Motor Transport Board are the intercity bus and inter-municipal livery industries. The discussion of the passenger carrier industry which follows will be restricted to these two modes.

### 1.1 Structure of the Intercity Bus Industry

#### 1.1.1 Operating Authority

Any company which wishes to operate an inter-city passenger bus service for compensation must apply for an operating authority from the Motor Transport Board. The Board may specify the locations

which can be served, the routes used, and the operating schedules and service provided. As well, the Board may specify the type of equipment to be used and the terminals to be established. Public service buses have licence plates beginning with PB. The PBX designation is used for buses authorized for extraprovincial operation. Bus companies with headquarters outside of Manitoba require operating authorities to operate in Manitoba, but do not require Manitoba vehicle licences due to the Canadian Agreement on Vehicle Registrations discussed in section III.

There are approximately twenty companies with Manitoba bus operating authorities. The majority of these are small operations with restricted authorities. The two largest operations are Grey Goose Bus Lines (including its subsidiary Manitoba Motor Transit Ltd.) and Greyhound Lines of Canada (including Greyhound Lines Inc.). Webb Bus Lines operates some Greyhound routes under contract. Due to the limited number of major carriers, confidentiality constraints restrict the amount of information which can be included in this report.

The intraprovincial operations of the major bus companies can be examined by considering the schedules of services provided, taken from Russell's Official Canadian Bus Guide. This information is used to summarize bus services received by 79 Manitoba communities in Table 38. Here, the communities are ordered by decreasing population size.

Table 38

Bus Service Provided to Manitoba Communities, 1982[1]

| Community | 1981 Population[2] | Bus Company Authority[3] | Number of Runs[4] | Number of Weekly Stops[5] | Type of Passenger Service[6] | Type of Parcel Express Service[7] | Stops per 1000 of population |
|---|---|---|---|---|---|---|---|
| Winnipeg | 564,473 | GG and GL | 106 | 359 | Reg | Agency-GG<br>P + C -GL | 0.64 |
| Brandon | 36,242 | GG and GL | 40 | 196 | Reg | Agency-GG<br>P + C-GL | 5.41 |
| Thompson | 14,288 | GG | 12 | 56 | Reg | Agency | 3.92 |
| Portage la Prairie | 13,086 | GG and GL | 32 | 204 | Reg | Agency-GG<br>P + C-GL | 15.59 |
| Selkirk | 10,037 | GG | 4 | 18 | Reg | Drop | 1.79 |
| Dauphin | 8,971 | GG and GL | 22 | 143 | Reg | Agency-GG<br>P + C-GL | 15.94 |
| Flin Flon | 7,894 | GG | 10 | 45 | Reg | Agency | 5.70 |
| Steinbach | 6,676 | GG | 6 | 33 | Reg | Agency | 4.94 |
| The Pas | 6,390 | GG | 8 | 52 | Reg | Agency | 8.14 |
| Winkler | 5,046 | GG | 7 | 42 | 24-Reg<br>18-Hwy | 24-Agency<br>18-Drop | 9.12 |
| Morden | 4,579 | GG | 6 | 33 | Reg | Agency | 7.21 |
| Swan River | 3,782 | GG | 12 | 73 | Reg | Agency | 19.30 |
| Neepawa | 3,425 | GG and GL | 20 | 132 | Reg | Agency-GG<br>P + C-GL | 38.54 |
| Virden | 2,940 | GL | 12 | 77 | Reg | P + C | 26.19 |
| Altona | 2,757 | GG | 2 | 14 | Reg | Agency | 5.08 |

Table 38 cont'd

| Community | 1981 Population[2] | Bus Company Authority[3] | Number of Runs[4] | Number of Weekly Stops[5] | Type of Passenger Service[6] | Type of Parcel Express Service[7] | Stops per 1000 of population |
|---|---|---|---|---|---|---|---|
| Minnedosa | 2,637 | GG and GL | 16 | 103 | Reg | Agency-GG P + C-GL | 39.06 |
| Beausejour | 2,462 | GG and GL | 7 | 54 | Reg | Agency-GG P + C-GL | 21.93 |
| Carman | 2,408 | GG | 6 | 36 | Reg | Agency | 14.95 |
| Leaf Rapids | 2,356 | GG | 2 | 14 | Reg | Agency | 5.94 |
| Killarney | 2,342 | GG | 6 | 30 | Reg | Agency | 12.81 |
| Stonewall | 2,210 | GG | 3 | 28 | Reg | Agency | 12.67 |
| Roblin | 1,953 | GG and GL | 8 | 47 | Reg | Agency-GG P + C-GL | 24.07 |
| Snow Lake | 1,853 | GG | 4 | 28 | Reg | Agency | 15.11 |
| Souris | 1,731 | GL | 6 | 38 | Reg | P + C | 21.95 |
| Boissevain | 1,660 | GG | 6 | 36 | Reg | Agency | 21.96 |
| Russell | 1,660 | GG and GL | 8 | 52 | Reg | Agency-GG P + C-GL | 31.33 |
| Morris | 1,570 | GG and GL | 8 | 56 | Reg | P + C | 35.67 |
| Gimli | 1,550 | GG | 4 | 15 | Reg | Drop | 9.68 |
| Carberry | 1,510 | GL | 9 | 63 | 35-Reg 28-Hwy | P + C | 41.72 |
| Ste. Anne | 1,338 | GL | 8 | 56 | Hwy Flag | None | 41.85 |
| Riverville | 1,329 | GG | 2 | 12 | Reg | Agency | 9.03 |
| Melita | 1,156 | GG and GL | 4 | 19 | Reg | Agency-GG P + C-GL | 16.44 |

Table 38 cont'd

| Community | 1981 Population[2] | Bus Company Authority[3] | Number of Runs[4] | Number of Weekly Stops[5] | Type of Passenger Service[6] | Type of Parcel Express Service[7] | Stops per 1000 of population |
|---|---|---|---|---|---|---|---|
| Deloraine | 1,136 | GG and GL | 4 | 26 | Reg | Agency-GG<br>P + C-GL | 22.89 |
| Rivers | 1,107 | GG | 2 | 10 | Reg | Agency | 9.03 |
| Ste. Rose du Lac | 1,090 | GG and GL | 14 | 98 | Reg | Agency-GG<br>P + C-GL | 89.91 |
| Grandview | 1,013 | GL | 6 | 42 | Reg | P + C | 41.46 |
| Lac du Bonnet | 985 | GG | 4 | 20 | Reg | Agency | 20.30 |
| Arborg | 974 | GG | 4 | 7 | Reg | Agency | 7.19 |
| Gladstone | 964 | GG and GL | 14 | 98 | 91-Reg<br>7-Flag | Agency-GG<br>P + C-GL | 101.66 |
| Teulon | 925 | GG | 4 | 26 | Reg | Agency | 28.11 |
| St. Pierre-Jolys | 919 | GG | 2 | 12 | Reg | Agency | 13.06 |
| Birtle | 887 | GG and GL | 8 | 52 | 45-Reg<br>7-Hwy Flag | Agency-GG<br>P + C-GL | 58.62 |
| Manitou | 861 | GG | 4 | 28 | Reg | Agency | 32.52 |
| Winnipegosis | 855 | GG | 2 | 14 | Reg | Agency | 16.37 |
| Pilot Mound | 838 | GG | 4 | 28 | Reg | Agency | 33.41 |
| Shoal Lake | 835 | GL | 6 | 42 | 35-Reg<br>7-Hwy Flag | P + C | 50.30 |
| Gilbert Plains | 812 | GL | 6 | 42 | Reg | P + C | 51.72 |
| MacGregor | 795 | GL | 8 | 56 | 49-Reg<br>7-Flag | P + C | 70.44 |
| Emerson | 762 | GL | 4 | 28 | Reg | P + C | 36.75 |

Table 38 cont'd

| Community | 1981 Population[2] | Bus Company Authority[3] | Number of Runs[4] | Number of Weekly Stops[5] | Type of Passenger Service[6] | Type of Parcel Express Service[7] | Stops per 1000 of population |
|---|---|---|---|---|---|---|---|
| Treherne | 743 | GL | 4 | 28 | Reg | P + C | 37.69 |
| Glenboro | 741 | GL | 4 | 28 | Reg | P + C | 37.79 |
| Hamiota | 728 | GG | 2 | 10 | Reg | Agency | 13.74 |
| Rossburn | 696 | GL | 2 | 12 | Reg | P + C | 17.24 |
| Powerview | 691 | None | 0 | 0 | None | None | 0 |
| Riverton | 657 | GG | 4 | 8 | Reg | Agency | 12.18 |
| Minitonas | 628 | GG | 8 | 56 | Reg | Agency | 89.17 |
| Notre Dame de Lourdes | 627 | None | 0 | 0 | None | None | 0 |
| McCreary | 618 | GG and GL | 6 | 42 | Reg | Agency-GG<br>P + C-GL | 67.96 |
| Somerset | 596 | GG | 2 | 12 | Reg | Agency | 20.13 |
| Plum Coulee | 592 | GG | 2 | 14 | Reg | Agency | 23.65 |
| St. Claude | 592 | GL | 4 | 28 | Reg | P + C | 47.30 |
| Winnipeg Beach | 565 | GG | 4 | 18 | Reg | Agency | 31.86 |
| Gretna | 545 | GG | 2 | 7 | Reg | Agency | 12.84 |
| Erickson | 540 | GG and GL | 6 | 40 | Reg | Agency-GG<br>P + C-GL | 74.07 |
| Elkhorn | 509 | GL | 7 | 49 | 14-Reg<br>14-Hwy Flag<br>21-Hwy | P + C | 96.27 |
| Wawanesa | 492 | GL | 4 | 28 | 21-Reg<br>7-Flag | P + C | 56.91 |

Table 38 cont'd

| Community | 1981 Population[2] | Bus Company Authority[3] | Number of Runs[4] | Number of Weekly Stops[5] | Type of Passenger Service[6] | Type of Parcel Express Service[7] | Stops per 1000 of population |
|---|---|---|---|---|---|---|---|
| Hartney | 490 | GG and GL | 4 | 22 | Reg | Agency-GG<br>P + C-GL | 44.90 |
| Crystal City | 489 | GG | 5 | 32 | Reg | Agency | 65.44 |
| Ethelbert | 474 | GG | 8 | 56 | 42-Reg<br>14-Flag | Agency | 118.14 |
| Binscarth | 472 | GG and GL | 8 | 52 | 45-Reg<br>7-Flag | Agency-GG<br>P + C-GL | 110.17 |
| Bowsman | 454 | GG | 4 | 28 | 14-Reg<br>14-Flag | Agency | 61.67 |
| Benito | 441 | None | 0 | 0 | None | None | 0 |
| Rapid City | 431 | GG | 3 | 21 | Hwy | None | 48.72 |
| St. Lazare | 414 | GG and GL | 4 | 24 | Reg | Agency-GG<br>None-GL | 57.97 |
| Cartwright | 384 | GG | 4 | 28 | Reg | Agency | 72.92 |
| Oak Lake | 369 | GL | 9 | 63 | 49-Reg<br>14-Flag | P + C | 170.73 |
| Garson | 318 | GG and GL | 6 | 34 | 20-Reg<br>14-Flag | None | 106.92 |
| Waskada | 239 | GG | 2 | 12 | Flag | None | 50.21 |
| Napinka | 132 | GG | 3 | 19 | Hwy, Flag | None | 143.94 |

1. Source: Russell's Guides, Inc., Official Canadian Bus Guide, September, 1982. Services provided by small carriers are not included.
2. Source: Manitoba Bureau of Statistics, Manitoba Census Population 1971, 1976, 1981 Final Counts.
3. Runs operated by Webb Bus Lines are included with Greyhound (GL) authority, and runs operated by Manitoba Motor Transit are included with Grey Goose (GG) authority.
4. Number of runs is the number of scheduled routes serving a community. A return route is considered two runs.
5. Number of Weekly stops is the number of times per week that a bus provides a particular community with an access and egress opportunity. Where a return route passes through the community twice, it is counted as two stops. Where the community is the origin or turnaround point of a route, a return route is counted as one stop.
6. The type of passenger service is coded as one of:
   Reg - regularly scheduled stop
   Flag - stop on request only
   Hwy - highway stop, where the bus does not travel into the community
7. The type of parcel express service is coded as one of:
   Agency - full services provided, including C.O.D., prepaid and collect express
   P + C - prepaid and collect express, no C.O.D.
   Drop - inbound prepaid express only, or drop-off point

For each community, the number of bus runs or routes serving the community are recorded. Winnipeg is served by the most runs at 106. Of the 79 communities, only three are not served by intercity buses. These are Powerview, Notre Dame de Lourdes, and Benito. In general, the number of runs declines with population, although there is considerable variation from this trend.

The number of weeky stops is determined for each community. A stop is considered to be an access and egress opportunity. Where a route starts or terminates one-half stop is recorded, since only an access or egress opportunity exists. Similarly one stop is counted when the community lies along a route, since there is an opportunity for both access and egress. Using this definition, the number of stops per week at each community is found, the type of passenger and freight service is recorded, and the number of stops per 1000 of community population is calculated.

The communities with the greatest number of weekly stops are Winnipeg, Portage la Prairie, Brandon, Dauphin and Neepawa in that order. The first four of these are among the largest six communities in Manitoba. The number of weekly stops generally decreased with population, with considerable variation. Selkirk, one of the largest communities, has only 18 stops per week. This excludes the commuter bus service to and from Winnipeg operated by Beaver Bus Lines, which partially explains the apparent low level of service.

To examine service levels further, the number of stops per 1000 of population was calculated for each community. This measure tends

to increase with decreasing population. Winnipeg has the lowest value at 0.64 and Selkirk second lowest at 1.79 of all communities with bus service. The communities with the highest values are Oak Lake at 170.73, Napinka at 143.94 and Binscarth at 118.14. All of these communities have less than 500 people. The number of stops per 1,000 of population may provide a better indication of the level of bus service than that provided by the total number of stops.

As mentioned, all but three of the 79 communities have bus service. Of the 76 with bus service, all except Rapid City, Ste. Anne, Waskada and Napinka have regular stops in town. Rapid City, Ste. Anne, and Napinka have highway stops several kilometres from town. Ste. Anne is also served directly by a regular service provided by a small carrier, Eagle Bus Lines. Waskada receives bus service only through telephone requests. Thirteen communities are served by a mixture of regular, highway and on request stops.

There are three types of parcel express services provided. An agency station provides full services including prepaid, collect and C.O.D. express. The second type of station handles prepaid and collect express (P + C), but no C.O.D. The final station type handles inbound prepaid express only. It is a drop-off point.

Only Grey Goose stations are agency stations. Of the 79 communities listed, 53 provide full services. Prepaid and collect services are provided at 16 stations. Selkirk and Gimli are the only two drop-off points. The remaining eight do not have parcel express service.

## 1.1.2 Operations Information

Due to the small number of intercity bus operators in Manitoba, no operations information can be released except for fleet information and the service information contained in section 1.1.1.

The Manitoba motor vehicle registration files for December, 1982 were accessed to provide fleet information for public service buses licenced in Manitoba. The information obtained is contained in Table 39.

A total of 27 different fleets contained 157 buses, for an average fleet size of 5.8 buses per fleet. Small fleets of 1 to 2 buses represented 18 or 67% of all fleets, while there were 3 fleets with more than 10 vehicles which represented 11% of all fleets. The vast majority of buses, 150 or 95.5% were owned with the remaining 7 or 4.5% leased.

It is important to note that there are many buses operating in Manitoba through licence reciprocity agreements without Manitoba licence plates and registrations. Cab cards are issued to approximately 225 buses registered in other provinces. These cards identify the vehicle and signify its coverage under the Canadian Agreement on Vehicle Registrations for operation in Manitoba.

## 1.1.3 Financial Information

The fares which can be charged intraprovincially by intercity bus operators are specified by the Motor Transport Board. The fares

Table 39

Manitoba Public Service Bus Fleets, 1982[1]

| Fleet Size | Number of Fleets | Number of Buses |
|---|---|---|
| 1 - 2 | 18 | 26 |
| 3 - 4 | 3 | 11 |
| 5 - 10 | 3 | 24 |
| More than 10 | 3 | 96 |
| Total | 27 | 157 |

1. Source: Manitoba vehicle registration files, December 1982.

are based strictly on mileage, with a constant rate per mile applied throughout the province. The bus companies may discount fares subject to Board approval. Such discounts may be applied to senior citizens and students on all routes, or to all passengers on specific routes in order to promote the use of buses.

Intercity bus companies also operate charter services in which buses are chartered to single groups for specific trips. The charter rates are also set by the Motor Transport Board.

A considerable proportion of the total revenue generated by intercity bus operators is derived from bus parcel express shipments. The rates charged for these shipments are set by the Board. There are limitations on the size and weight of packages which can be carried. No single package can be over 24 inches in height, 40 inches in width or 84 inches in length except for specified automobile parts and glass products. As well, package weight cannot exceed 150 pounds and the value cannot exceed $500.00. These limits were instituted to reflect bus compartment space. The bus express rates and conditions of carriage are contained in Manitoba Regulation 245/81.

The formula used to produce the bus express tariff is based on weight and distance, and has the same general characteristics as the general freight formula.

Bus express rates are calculated by computer. The process includes the accessing of a data set of traffic composition by weight and

distance which is used to develop different rate schedules and estimate the overall impact on express revenue.

The registration and insurance fees for public service buses vary depending on the wheel base and number of seats for registrations and on the model year of the bus for insurance purposes. These fees can be found in the Manitoba Gazette and the Vehicle Registration and Insurance Manual.

## 1.2 Structure of the Inter-Municipal Livery Industry

### 1.2.1 Operating Authority

An inter-municipal livery vehicle is a passenger vehicle other than a bus licenced for the transportation of persons between or within municipalities for compensation. This type of vehicle may be licenced to operate anywhere in Manitoba. Here a distinction is made between an inter-municipal livery vehicle and a taxicab. Taxicabs are licenced for operation within Winnipeg and are not included under the public service vehicle definition. Livery vehicles are considered to be public service vehicles. As such, they must be registered with the approval of the Motor Transport Board. Rural livery vehicles have licence plates with letter combinations LCA or LCB. In contrast, taxicabs are controlled by the Taxicab Board, and have licences with the letter combination XXA.

Entry to the inter-municipal livery business is controlled by the Board, and the area of operation is specified. Inter-municipal fares are prescribed by the Board, while local municipal or city councils may pass by-laws governing fares to be charged within their jurisdiction. It is possible for a taxicab to be licenced for operation both as a taxicab under the Taxicab Act and as an inter-municipal livery vehicle under the Highway Traffic Act. These vehicles would carry LVA plates. A total of 376 of the 400 taxicabs within Winnipeg are licenced in this way. In addition, there are 19 limousines with LVL plates which are considered to be inter-municipal livery vehicles.

Fleet information has been tabulated in Table 40 for inter-municipal livery vehicles by type. The 239 rural vehicles are registered to 132 different owners, for an average fleet size of 1.8 vehicles. The 376 city vehicles are registered to 131 different owners, for an average fleet size of 2.9 vehicles. There are 19 limousines registered to 11 owners, for an average fleet size of 1.7 vehicles. The small fleet sizes are partially explained by the fact that owner-operators who register vehicles in their own names are considered to be a fleet, even if they operate within a larger company.

An earlier listing of rural inter-municipal livery vehicles for Februry, 1982 provided information on model year. The 255 inter-municipal livery vehicles outside Winnipeg on this list are categorized by model year in Table 41. Only one 1982 model vehicle is registered. The model year which occurs most often is 1980, with 54 vehicles. The average age, assuming that 1982 models are new, 1981 models are one year old and so on, is 3.4 years. Nineteen vehicles, or 7.5% of the total are 1975 model year or older.

Table 40

Manitoba Inter-Municipal Livery Fleets by Type, 1982[1]

| Number of Vehicles In Fleet | Number of Fleets[2] Rural Livery (Class L1) | City Livery (Class X2) | Limousine (Class X3) |
|---|---|---|---|
| 1 | 81 | 104 | 5 |
| 2 | 31 | 14 | 4 |
| 3 | 9 | 6 | 2 |
| 4 | 5 | 1 | 0 |
| 5 | 2 | 0 | 0 |
| 6 | 0 | 1 | 0 |
| 7 | 0 | 0 | 0 |
| 8 | 0 | 1 | 0 |
| 9 | 2 | 0 | 0 |
| 10 | 1 | 0 | 0 |
| More than 10 | 1 | 4 | 0 |
| Total Vehicles Registered | 239 | 376 | 19 |
| Total Number of Fleets | 132 | 131 | 11 |
| Average Fleet Size | 1.8 | 2.9 | 1.7 |

1. Source: Manitoba vehicle registration files, December 1982.
2. Each different registered owner represents a different fleet, even if this owner is an owner-operator working within a larger company.

Table 41

Model Year of Inter-Municipal Livery Vehicles in Manitoba, Excluding Winnipeg, February 1982[1]

| Model Year of Vehicle | Number of Vehicles |
|---|---|
| 1982 | 1 |
| 1981 | 48 |
| 1980 | 54 |
| 1979 | 46 |
| 1978 | 36 |
| 1977 | 35 |
| 1976 | 16 |
| 1975 | 11 |
| 1974 | 5 |
| 1973 | 0 |
| 1972 | 0 |
| 1971 | 1 |
| 1970 | 0 |
| 1969 | 0 |
| 1968 | 1 |
| 1967 | 1 |
| Total, All Years | 255 |

1. Source: Motor Vehicle Branch, Manitoba Department of Highways and Transportation.

### 1.2.2 Operations Information

There is no operations information available for inter-municipal livery vehicles.

### 1.2.3 Financial Information

The fares which can be charged by inter-municipal livery operators are specified by the Motor Transport Board. They are based on mileage. For operations within municipalities or cities, the municipal government has the authority to pass by-laws governing the fare to be charged within their jurisdiction.

The registration and insurance fees for inter-municipal livery vehicles are controlled by the Province. Registration fees are based on the wheelbase of the vehicle. Insurance fees are based on the territory or region of registration, and do not vary according to model year.

## 2. Characteristics of Passenger Flows

No information is available concerning passenger flow in inter-municipal livery vehicles. Some information concerning passengers carried by route exists for intercity buses but this is provided by the intercity bus operators to the Motor Transport Board on a confidential basis and cannot be released. Information published by Statistics Canada on the intercity bus passenger industry is aggregated to the national level to preserve confidentiality. This information is contained in Passenger Bus and Urban Transit Statistics, Statistics Canada publication 53-215.

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## PERFORMANCE EVALUATION INTRODUCTION
## BLOCK H - EXTINGUISHERS

PROCEDURE:

To test this block the instructor will need the following equipment and material:

1. Useable extinguishers of the type used by your Fire Department.
2. Flammable liquid (3 parts oil (used) 2 parts gasoline)
3. Holding pan (1m x 1m x 10cm) minimum size.
4. Class A combustibles (wood, paper, mattress) if pressurized water used.

Insure test area activities will not bother downwind exposures.

# MANITOBA FIRE COLLEGE

## PERFORMANCE EVALUATION

| ITEMS TO BE EVALUATED | √ | X | COMMENTS |
|---|---|---|---|
| BLOCK H - EXTINGUISHERS | | | |
| 1. Identifies burning material (A,B,C,D,). | | | |
| 2. Selects correct extinguisher for burning material. | | | |
| 3. Uses extinguisher in a safe manner according to demands of fire. | | | |
| 4. Describes the different types of extinguishers in the community and their operating principles. | | | |
| 5. Inspects extinguisher: | | | |
| 5.1 Seal, tag, pin. | | | |
| 5.2 Hose, nozzle | | | |
| 5.3 Cartridge | | | |
| 5.4 Gauge | | | |
| 5.5 Extinguisher weight | | | |
| 5.6 Approvel | | | |
| 5.7 Damage | | | |
| 5.8 Test date | | | |

Candidate(s): _____ Fire Dept: _____

_____ Date: _____

_____ Examiner: